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Art. I.—ROMANCE OF LOUISIANA HISTORY.*

POETRY is the daughter of imagination, and imagination is, perhaps, one of the highest gifts of heaven, the most refined ethereal part of the mind, because when carried to perfection, it is the combined essence of all the finest faculties of the human intellect. There may be sound judgment, acute perceptions, depth of thought, great powers of conception, of discrimination, of research, of assimilation, of combination of ideas, without imagination, or least without that part of it which elaborates and exalts itself into poetry, but how can we conceive the existence of a poetical imagination in its highest excellence, without all the other faculties? Without them, what imagination would not be imperfect or diseased? It is true that without imagination there may be a world within the mind, but it is a world without light. Cold it remains, and suffering from the effects of partial organization, unless by some mighty fiat imagination is breathed into the dormant mass, and the sun of poetry, emerging in the heaven of the mind, illumines and warms the several elements of which it is composed, and completes the creation of the intellect.

Hence the idea of all that is beautiful and great is concentrated in the word poetry. There is no grand conception of the mind in which that intellectual faculty which constitutes poetry is not to be detected.

* The present article comprises the substance of an address delivered by the Hon C. Gayarre before the People's Lyceum, at New Orleans, in April last, and now first committed to print.

What is great and noble, is and must be poetical, and what is poetical must partake, in some degree or other, of what is great and noble. It is hardly possible to conceive an Alexander, a Cæsar, a Napoleon, a Newton, a Lycurgus, a Mahomet, a Michael Angelo, a Canova, or any other of those wonderful men who have carried as far as they could go, the powers of the human mind in the several departments in which they were used, without supposing them gifted with some of those faculties of the imagination which enter into the composition of a poetical organization. Thus every art and almost every science has its poetry, and it is from the unanimous consent of mankind on this subject that it has become so common to say "the poetry" of music, of sculpture, of architecture, of dancing, of painting, of history, and even the poetry of religion, meaning that which is most pleasing to the eye or to the mind, and ennobling to the soul. We may therefore infer from the general feeling to which I have alluded, that where the spirit of poetry does not exist, there cannot be true greatness; and it can, I believe, be safely averred, that to try the gold of all human actions and events, of all things and matters, the touchstone of poetry is one of the surest.

I am willing to apply that criterion to Louisiana, considered both physically and historically; I am willing that my native State, which is but a fragment of what Louisiana formerly was, should stand or fall by that test, and I do not fear to approach with her the seat of judgment. I am prepared to show that her history is full of poetry of the highest order and of the most varied nature. I have studied the subject *con amore*, and with such reverential enthusiasm, and I may say with such filial piety, that it has grown upon my heart as well as upon my mind. May I be able to do justice to its merits, and to raise within you a corresponding interest to that which I feel! To support the assertion that the history of Louisiana is eminently poetical, it will be sufficient to give you short graphical descriptions of those interesting events which constitute her annals. Bright gems they are, encircling her brows, diadem-like, and worthy of that star which has sprung from her forehead to enrich the American constellation in the firmament of liberty.

Three centuries have hardly elapsed, since that immense territory which extends from the gulf of Mexico to the lakes of Canada, and which was subsequently known under the name of Louisiana, was slumbering in its cradle of wilderness, unknown to any of the white race to which we belong. Man was there, however, but man in his primitive state, claiming as it were, in appearance at least, a different origin from ours, or being at best a variety of our species. There, was the hereditary domain of the red man, living in scattered tribes over that

magnificent country. Those tribes earned their precarious subsistence chiefly by pursuing the inhabitants of the earth and of the water; they sheltered themselves in miserable huts, spoke different languages, observed contradictory customs, and waged fierce war upon each other. Whence they came none knew; none knows, with absolute certainty, to the present day, and the faint glimmerings of vague traditions have afforded little or no light to penetrate into the darkness of their mysterious origin. Thus a wide field is left open to those dreamy speculations of which the imagination is so fond.

Whence came the Natchez, those worshippers of the sun with eastern rites? How is it that Grecian figures and letters are represented on the earthen wares of some of those Indian nations? Is there any truth in the supposition that some of those savages whose complexion approximates most to ours, draw their blood from that Welsh colony which is said to have found a home in America, many centuries since? Is it possible that Phœnician adventurers were the pilgrim fathers of some of the aborigines of Louisiana? What copper-colored swarm first issued from Asia, the revered womb of mankind, to wend its untraced way to the untenanted continent of America? What fanciful tales could be weaved on the powerful Choctaws, or the undaunted Chickassaws, or the unconqnerable Mobiliens! There the imagination may riot in the poetry of mysterious migrations, of human transformations; in the poetry of the forests, of the valleys, of the mountains, of the lakes and rivers, as they came fresh and glorious from the hand of the Creator, in the poetry of barbaric manners, laws and wars. What heroic poems might not a future Ossian devise on the red monarchs of old Louisiana! Would not their strange history, in the hands of a Tacitus, be as interesting as that of the ancient barbarian tribes of Germany, described by his immortal pen? Is there in that period of their existence which precedes their acquaintance with the sons of Europe, nothing which, when placed in contrast with their future fate, appeals to the imagination of the moralist, of the philosopher, and of the divine? Who, without feeling his whole soul glowing with poetical emotions, could sit under yonder gigantic oak, the growth of a thousand years, on the top of that hill of shells, the sepulchre of man, piled up by his hands, and overlooking that placid lake where all would be repose, if it were not for that solitary canoe, a moving speck, hardly visible in the distance, did it not happen to be set in bold relief, by being on that very line where the lake meets the horizon, blazing with the last glories of the departing sun? Is not this the very poetry of landscape, of Louisianian landscape?

When diving into the mysteries of the creation of that part of the southwestern world which was once comprehended in the limits of Louisiana, will not the geologist himself pause, absorbed in astonishment at the number of centuries which must have been necessary to form the delta of the Mississippi? When he discovers successive strata of forests lying many fathoms deep on the top of each other; when he witnesses the exhumation of the fossil bones of mammoths, elephants or huge animals of the antediluvian race; when he reads the hieroglyphic records of Nature's wonderful doings, left by herself on the very rocks, or other granite and calcareous tablets of this country, will he not clasp his hands in ecstacy, and exclaim, "Oh! the dryness of my study has fled; there is poetry in the very foundation of this extraordinary land!"

Thus I think that I have shown that the spirit of poetry was moving over the face of Louisiana, even in her primitive state, and still pervades her natural history. But I have dwelt enough on Louisiana in the dark ages of her existence, of which we can know nothing, save by vague traditions of the Indians. Let us approach those times where her historical records begin to assume some distinct shape.

On the 31st of May, 1539, the bay of Santo Spiritu, in Florida, presented a curious spectacle. Eleven vessels of quaint shape, bearing the broad banner of Spain, were moored close to the shore; one thousand men of infantry, and three hundred and fity men of cavalry, fully equipped, were landing in proud array under the command of Hernando De Soto, one of the most illustrious companions of Pizarro in the conquest of Peru, and reputed one of the best lances of Spain! "When he led in the van of battle, so powerful was his charge," says the old chronicler of his exploits, "so broad was the bloody passage which he carved out in the ranks of the enemy, that ten of his men at arms could with ease follow him abreast." He had acquired enormous wealth in Peru, and might have rested satisfied, a knight of renown, in the government of St. Jago de Cuba, in the sweet enjoyment of youth and of power, basking in the smiles of his beautiful wife, Isabella de Bobadilla. But his adventurous mind scorns such inglorious repose, and now he stands erect and full of visions bright, on the sandy shore of Florida, whither he comes, with feudal pride, by leave of the king, to establish nothing less than a marquisate, ninety miles long by forty-five miles wide, and there to rule supreme, a governor for life, of all the territory that he can subjugate. Not unmindful he, the christian knight, the hater and conqueror of Moorish infidelity, of the souls of his future vassals; for, twenty-two ecclesiastics accompany him to preach the

word of God. Among his followers are gentlemen of the best blood of Spain and of Portugal: Don Juan de Guzman, Pedro Calderon, who, by his combined skill and bravery, had won the praises of Gonzalvo de Cordova, 'yclept "the great captain;" Vasconcellos de Silva, of Portugal, who for birth and courage knew no superior; Nuno Tobar, a knight above fear and reproach; and Muscoso de Alvarado, whom that small host of heroes ranked in their estimation next to De Soto himself. But I stop an enumeration which, if I did justice to all, would be too long.

What materials for romance! Here is chivalry, with all its glittering pomp, its soul stirring aspirations, in full march, with its iron heels and gilded spurs, towards the unknown and hitherto unexplored soil of Louisiana. In sooth, it must have been a splendid sight! Let us look at the glorious pageantry as it sweeps by, through the long vistas of those pine woods! How nobly they bear themselves, those bronzed sons of Spain, clad in refulgent armour! How brave that music sounds! How fleet they move, those Andalusian chargers, with arched necks and dilated nostrils! But the whole train suddenly halts in that verdant valley, by that bubbling stream, shaded by those venerable oaks with gray moss hanging from their branches in imitation of the whitening beard of age. Does not the whole encampment rise distinct upon your minds?

The tents with gay pennons, with armorial bearings; the proud steed whose impatient foot spurns the ground; those men stretched on the velvet grass and recruiting their wearied strength by sleep; some singing old Castilian or Moorish roundelays; others musing on the sweet rulers of their souls, left in their distant home; a few kneeling before the officiating priest, at the altar which a moment sufficed for their pious ardor to erect, under yonder secluded bower; some burnishing their arms, others engaged in mimic warfare and trials of skill or strength; De Soto sitting apart with his peers in rank if not in command, and intent upon developing to them his plans of conquest, while the dusky faces of some Indian boys and women in the background express wild astonishment. None of the warriors of that race are to be seen; they are reported to be absent on a distant hunting excursion. But, methinks that at times I spy through the neighboring thickets the fierce glance of more than one eye, sparkling with the suppressed fury of anticipated revenge. What a scene! and would it not afford delight to the poet's imagination or to the painter's eye?

In two ponderous volumes, the historian Garcillasso relates the thousand incidents of that romantic expedition. What more interesting

than the reception of Soto at the court of the Princess Cofachiqui, the Dido of the wilderness! What battles, what victories over men, over the elements themselves, and over the endless obtacles thrown out by rebellious nature! What incredible physical difficulties overcome by the advancing host! How heroic is the resistance of the Mobiliens and of the Alabamas! With what headlong fury those denizens of the forest rush upon the iron clad warriors, and dare the thunders of those whom they take to be the children of the sun! How splendidly described is the siege of Mobile, where women fought like men, and wrapped themselves up in the flames of their destroyed city rather than surrender to their invaders!

But let the conquering hero beware! Now he is encamped on the territory of the Chickassaws, the most ferocious of the Indian tribes. And lucky was it that Soto was as prudent as he was brave, and slept equally prepared for the defence and for the attack. Hark! in the dead of a winter's night, when the cold wind of the north, in the month of January, 1541, was howling through the leafless trees, a simultaneous howl was heard, more hideous far than the voice of the tempest. The Indians rush impetuous, with fire-brands, and the thatched roofs which sheltered the Spaniards are soon on fire, threatening them with immediate destruction. The horses rearing and plunging in wild affright, and breaking loose from their ligaments; the undaunted Spaniards, half naked, struggling against the devouring element and the unsparing foe; the desperate deeds of valor executed by Soto and his companions; the deep-toned shouts of St. Jago and Spain to the rescue; the demon-like shrieks of the red warriors; the final overthrow of the Indians; the hot pursuit by the light of the flaming village;—form a picture highly exciting to the imagination, and cold indeed must he be who does not take delight in the strange contrast of the heroic warfare of chivalry on one side, and of the untutored courage of man in his savage state, on the other.

It would be too long to follow Soto in his peregrinations during two years, through part of Alabama, Mississippi, and Tennessee. At last he stands on the banks of the Mississippi, near the spot where now flourishes the Egyptian named city of Memphis. He crosses the mighty river, and onward he goes, up to the White river, while roaming over the territory of the Arkansas. Meeting with alternate hospitality and hostility on the part of the Indians, he arrives at the mouth of the Red river, within the present limits of the State of Louisiana. There he was fated to close his adventurous career.

Three years of intense bodily fatigue and mental excitement had un-

dermined the hero's constitution. Alas! well might the spirit droop within him! He had landed on the shore of the North American continent with high hopes, dreaming of conquest over wealthy nations and magnificent cities. What had he met? Interminable forests, endless lagoons, inextricable marshes, sharp and continual conflicts with men little superior, in his estimation, to the brutish creation. He who in Spain was cheered by beauty's glance, by the songs of the minstrel, when he sped to the contest with adversaries worthy of his prowess, with the noble and chivalric Moors; he who had revelled in the halls of the imperial Incas of Peru, and who there had amassed princely wealth; he, the flower of knightly courts, had been roaming like a vagrant over an immense territory, where he had discovered none but half naked savages, dwelling in miserable huts, ignobly repulsive when compared with Castilla's stately domes, with Granada's fantastic palaces, and with Peru's imperial dwellings, massive with gold! His wealth was gone, two-thirds of his brave companions were dead. What account of them would he render to their noble families! He, the bankrupt in fame and in fortune, how would he withstand the gibes of envy! Thought, that scourge of life, that inward consumer of man, racks his brain, his heart is seared with deep anguish; a slow fever wastes his powerful frame, and he sinks at last on the couch of sickness, never to rise again. The Spaniards cluster round him, and alternately look with despair at their dying chieftain, and at the ominous hue of the bloody river, known at this day under the name of the Red River. But not he the man to allow the wild havoc within the soul to betray itself in the outward mien; not he, in common with the vulgar herd, the man to utter one word of wail! With smiling lips and serene brow he cheers his companions and summons them, one by one, to swear allegiance in his hands to Muscoso de Alvarado, whom he designates as his successor. "Union and perseverance, my friends, he says; so long as the breath of life animates your bodies, do not falter in the enterprise you have undertaken. Spain expects a richer harvest of glory and more ample domains from her children." These were his last words, and then he dies. Blest be the soul of the noble knight and of the true Christian! Rest his mortal remains in peace within that oaken trunk scooped by his companions, and by them sunk many fathoms deep in the bed of the Mississippi!

The Spaniards, at first, had tried to conceal the death of Soto from the Indians, because they felt that there was protection in the belief of his existence. What mockery it was to their grief, to simulate joy on the very tomb of their beloved chief, whom they had buried in their camp

before seeking for him a safer place of repose! But when, the slaves of hard necessity, they were, with heavy hearts but smiling faces, coursing in tournament over the burial ground, and profaning the consecrated spot, the more effectually to mislead the conjectures of the Indians, they saw that their subterfuge was vain, and that the red men with significant glances, were pointing to each other the precise spot where the great white warrior slept. How dolorously does Garcillasso describe the exhumation and the plunging of the body into the turbid stream of the Great Father of Rivers!

Then comes an Odyssey of woes. The attempt of the Spaniards to go by land to Mexico; their wandering as far as the Rio Grande and the mountainous region which lies between Mexico and Texas, and which was destined, in after years, to be so famous in American history; their return to the mouth of Red River; their building of vessels capable of navigating at sea; the tender compassion and affectionate assistance of the good Cazique Anilco; the league of the other Indian princes, far and wide, under the auspices of the great king, Quigualtanqui, the Agamemnon of the confederacy; the discovery of the plot; the retreat of all the Indian chiefs save the indomitable Quigualtanqui; the fleet of one thousand canoes, mounted by twenty thousand men, with which he pursued the weary and despairing Spaniards for seventeen long days, assailing them with incessant fury; the giving up of the chase only when the sea was nearly in sight; the fierce parting words of the Indians to the Spaniards: "Tell your countrymen that you have been pursued by Quigualtanqui alone; if he had been better assisted by his peers, none of you would have survived to tell the tale;" the solemn rites with which, in their thousand canoes riveted on the water, they, on the day they ceased their pursuit, adored the rising sun and saluted him with their thanksgivings for the expulsion of the invaders; the hair breadth escapes of the three hundred Spaniards who alone out of the bright host of their former companions, had succeeded in fleeing from the hostile shore of Louisiana; their toils during a navigation of ninety days to the port of Panuco, where they at last arrived in a state of utter destitution, are all thrilling incidents connected with the history of Louisiana and replete with the very essence of poetry.

When Alvarado, the Ulysses of that expedition, related his adventures in the halls of Montezuma, Don Francisco de Mendoza, the son of the viceroy, broke out with passionate admiration of the conduct of Quigualtanqui: "A noble barbarian," exclaimed he, "an honest man

and a true patriot." This remark, worthy of the high lineage and of the ancestral fame of him who spoke it, is a just tribute to the Louisianian chief, and is an apt epilogue to the recital of those romantic achievements, the nature of which is such, that the poet's pen would be more at ease with it than that of the historian.

One hundred and thirty years had passed away since the apparition of Soto on the soil of Louisiana, without any further attempt of the white race to penetrate into that fair region, when on the 7th of July, 1673, a small band of Europeans and Canadians reached the Mississippi, which they had come to seek from the far distant city of Quebec. That band had two leaders, Father Marquette, a monk, and Joliet, a merchant, the prototypes of two great sources of power, religion and commerce, which, in the course of time, were destined to exercise such influence on the civilization of the western territory, traversed by the mighty river which they had discovered. They could not be ordinary men, those adventurers who, in those days, undertook to expose themselves to the fatigues and perils of a journey through unknown solitudes, from the St. Lawrence to the Mississippi! That humble monkish gown of Father Marquette concealed a hero's heart; and in the merchant's breast there dwelt a soul that would have disgraced no belted knight.

Whether it was owing to the peaceful garb in which they had presented themselves, or to some other cause, the Indians hardly showed any of that hostility which they had exhibited towards the armed invasion of Spain. Joliet and Farther Marquette floated down the river without much impediment, as far as the Arkansas. There, having received sufficient evidence that the Mississippi discharged itself into the Gulf of Mexico, they retraced their way back and returned to Canada. But in that frail bark drifting down the current of the Mississippi, and in which sat the hard plodding merchant, with the deep wrinkles of thought and forecast on his brow, planning schemes of trade with unknown nations, and surveying with curious eye that boundless territory which seemed, as he went along, to stretch in commensurate proportion with the infiniteness of space; in that frail bark, I say, where mused over his breviary that gray headed monk, leaning on that long staff, surmounted with the silver cross of Christ, and computing the souls that that he had saved and still hoped to save from idolatry, is there not as much poetry as in the famed vessel of Argos, sailing in quest of the golden fleece? Were not their hearts as brave as those of the Greek adventurers? were not their dangers as great? and was not the object which they had in view much superior?

The grandeur of their enterprize was, even at that time, fully appreciated. On their return to Quebec, and on their giving information that they had discovered that mighty river of which the Europeans had but a vague knowledge conveyed to them by the Indians, and which, from the accounts given of its width and length, was considered to be one of the greatest wonders of the world, universal admiration was expressed, the bells of the Cathedral tolled merrily for a whole day, and the bishop, followed by his clergy and the whole population, sang a solemn Te Deum at the foot of the altar. Thus, on the first acquaintance of our European fathers with the great valley of the Missisippi, of which our present State of Louisiana is the heart, there was an instinct that told them it was *there*, that the seeds of empire and greatness were sown. Were they not right in those divinations which pushed them onward to that favored spot through so many obstacles? Greatness and empire were *there*, and therefore all the future elements of poetry.

Joliet and Marquette were dead, and nothing yet had been done to take possession of the newly discovered regions of the West; but the impetus was given; the march of civilization once begun could not retrograde; that mighty traveller, with religion for his guide, was pushed onward by the hand of God; and the same spirit which had driven the crusaders to Asia, now turned the attention of Europe to the continent of America. The spell which had concealed the Mississippi amidst hitherto impenetrable forests and, as it were, an ocean of trees, was broken, and the Indians who claimed its banks as their hereditary domain, were now fated to witness the rapid succession of irresistible intruders.

Seven years, since the expedition of Marquette and Joliet, had rolled by, when Robert Cavalier de La Salle, in the month of January, 1682, feasted his eyes with the sight of the far famed Mississippi. For his companions he had forty soldiers, three monks, and the chevalier de Tonti. He had received the education of a Jesuit, and had been destined to the cloister and to become a tutor of children in a seminary of that celebrated order of which he was to become a member. But he had that will, and those passions, and that intellect which cannot be forced into a contracted channel of action. Born poor and a plebeian, he wished to be both noble and rich; obscure, he longed to be famous. Why not? Man shapes his own destinies when the fortitude of the soul corresponds with the vigorous organization of the mind. When the heart dares prompt the execution of what genius conceives, nothing remains but to choose the field of success. That choice was soon made

by La Salle. America was then exercising magnetic attraction upon all bold spirits, and did not fail to have the same influence on his own. Obeying the impulse of his ambition, he crossed the Atlantic without hesitation, and landed in Canada in 1673.

When on the continent of America, that fond object of his dreams, La Salle felt that he was in a congenial atmosphere with his temperament. His mind seemed to expand, his conceptions to become more vivid, his natural eloquence to be gifted with more persuasion, and he was acknowledged at once by all who saw and heard him, to be a superior being. Brought into contact with Count Frontenac, who was the governor of Canada, he communicated to him his views and projects for the aggrandizement of France, and suggested to him the gigantic plan of connecting the St. Lawrence with the Mississippi by an uninterrupted chain of forts. "From the information which I have been able to collect," said he to the Count, "I think I may affirm that the Mississippi draws its source somewhere in the vicinity of the Celestial Empire, and that France will be not only the mistress of all the territory between the St. Lawrence and the Mississippi, but will command the trade of China, flowing down the new and mighty channel which I shall open to the Gulf of Mexico." Count Frontenac was seduced by the magnificence of the prospect sketched by the enthusiast, but not daring to incur the expenses which such an undertaking would have required, referred him to the court of France.

To France, then, the adventurer returns with increased confidence; for he had secured one thing, he had gained one point: introduction to the noble and to the wealthy under the auspices of Count Frontenac. The spirit of Columbus was in him, and nothing abashed he would have forced his way to the foot of the throne and appealed to Majesty itself, with that assurance which genius imparts. But sufficient was it for him to gain the good graces of one of the royal blood of France, the Prince de Conti. He fired the prince's mind with his own contagious enthusiasm, and through him obtained from the king not only an immense concession of land, but was clothed with all the powers and privileges which he required for trading with the Indians and for carrying on his meditated plans of discovery. Nay, more, he was ennobled by letters patent, and thus one of the most ardent wishes of his heart was gratified. At last, he was no longer a plebeian, and with Macbeth he could exclaim, "Now, thane of Cawdor, the greatest is behind."

La Salle re-crossed the Atlantic with one worthy of being his *fidus Achates*, and capable of understanding the workings of his mind and of

his heart. That man was the chevalier De Tonti, who, as an officer, had served with distinction in many a war, and who afterwards became famous among the Indians for the iron hand with which he had artificially supplied the one which he had lost.

On the 15th of September, 1678, proud and erect with the consciousness of success, La Salle stood again in the walls of Quebec, and stimulated by the cheers of the whole population, he immediately entered into the execution of his projects. Four years after, in 1682, he was at the mouth of the Mississippi, and in the name (as appears by a notarial act still extant) of the *most puissant, most high, most invincible and victorious Prince*, Louis the Great, King of France, took possession of all the country which he had discovered. How his heart must have swelled with exultation, when he stood at the mouth of the great river on which all his hopes had centred; when he unfurled the white banner and erected the stately column to which he appended the royal escutcheon of France, amidst the shouts of his companions and the discharge of fire-arms! With what devotion he must have joined in the solemn *Te Deum* sung on that memorable occasion!

To relate all the heart-thrilling adventures which occurred to La salle during the four years which elapsed between the opening and the conclusion of that expedition, would be to go beyond the limits which are allotted to me. Suffice it to say, that at this day to overcome the one-hundredth part of the difficulties which he had to encounter, would immortalize a man. Ah! if it be true that man is never greater than when engaged in a generous and unyielding struggle against dangers and adversity, then must it be admitted that during those four years of trials La Salle was pre-eminently great. Was he not worthy of admiration, when to the camp of the Iroquois, who at first had received him like friends, but had been converted into foes, he dared to go alone, to meet the charges brought against him by the subtle Mansolia, whose words were so persuasive and whose wisdom appeared so wonderful that it was attributed to his holding intercourse with spirits of another world. How interesting the spectacle! How vividly it pictures itself to my mind! How it would grace the pages of a Fennimore Cooper or of one having the magic pen of a Walter Scott! Methinks I see that areopagus of stern old Indian warriors listening with knit brows and compressed lips to the passionate accusation so skilfully urged against La Salle, and to the prediction that amity to the white race was the sure fore-runner of destruction to all the Indian tribes. La Salle rose in his turn; how eloquent, how pathetic he was when appealing to the better feelings of the Indians, and how deserving of the verdict rendered in his favor!

But the enmity, the ambushes of Indians were not to him the only sources of danger. *Those* he could have stood unmoved! But what must have been his feelings when he became conscious of the poison which had been administered to him by some of his companions, who thought that by destroying him, they would spare to themselves the anticipated horrors of an expedition which they no longer had the courage to prosecute! What his despair was, is attested by the name of "*Creve Cœur*," which he gave to a fort he built a short time after. The fort of the "Broken Heart!" But let us turn from his miseries to the more grateful spectacle of his ovation.

In 1684 he returned to France, and found himself famous. He, the poor boy, the ignoble by birth, for whom paternal tenderness had dreamed nothing higher than the honor of being a teacher in a seminary of Jesuits, was presented to Louis XIV., amidst all the splendors of his court! That Jupiter among the kings of the earth had a smile to bestow upon the humble subject who came to deposit at the foot of the throne the title-deeds of such broad domains. But that smile of royalty was destined to be the last smile of fortune. The favors which he then obtained bred nothing but reverses. Every thing, however, wore a bright aspect, and the star of his destiny appeared to be culminating in the heavens.

Thus a fleet composed of four vessels, was put at his disposal, with all the materials necessary to establish a colony, and once more he left the shores of his native country, but this time invested with high command, and hoping perhaps to be the founder of an empire. That, indeed, was something worth having struggled for! But alas! he had struggled in vain; the meshes of adverse fate were drawing close around him. *Here* is not the place to relate his misunderstandings, degenerating into bitter quarrels with the proud Beaujeu, who had the subordinate command of the fleet, and who thought himself dishonored, he, the old captain of thirty years standing, he the nobleman, by being placed under the control of the unprofessional, of the plebeian, of him whom he called a pedagogue, fit only to rule over children. The result of that conflict was, that Lasalle found himself abandoned on the shores of the Bay of St. Bernard, in 1685, and was reduced to shift for himself, with very limited resources. Here follows a period of three other years of great sufferings and of bold and incessant wanderings through the territory of the present State of Texas, until after a long series of adventures, he was basely murdered by his French companions, and revenged by his body-servant, an Englishman by birth. He died

somewhere about the spot where now stands the city of Washington, which owes its foundation to some of that race to which belonged his avenger, and the star-spangled banner now proudly waves where the first pioneer of civilization consecrated with his blood the future land of liberty.

The rapid sketch which I have given shows that so much of Lasalle's life as belongs to history, occupies a space of fifteen years, and is so full of incidents that it affords materials enough for the production of a voluminous and interesting book. But I think that I may safely close my observations with the remark, that he who will write the life of that extraordinary man, however austere his turn of mind may be, will hardly be able to prevent the golden hues of poetry from overspreading the pages which he may pen, where history is so much like romance that, in many respects, it is likely to be classed as such by posterity.

Here I must close this historical sketch; here I must stop on the threshold of the edifice through which I should like to wander with you, in order to call your attention not only to the general splendor, but to the minute perfection of its architecture. Perhaps, at a future period, if your desire should keep pace with my inclination, I may resume the subject, and I believe it will then be easy for me to complete the demonstration that our annals constitute a rich mine, where lies in profusion the purest ore of poetry, not to be found in broken and scattered fragments, but forming an uninterrupted vein through the whole history of Louisiana, in all its varied phases, from the primitive settlement made at Biloxi, to the present time, when she wears the diadem of sovereignty, and when, with her blood and treasure, and with a spirit of chivalry worthy of her Spanish and French descent, and of her Anglo-Saxon adoption, she was the first to engage in the support of that war which, so glorious in its beginning at Palo Alto, Resaca de la Palma, Monterey, and Buena Vista, will undoubtedly have an equally glorious, and I think I may add, a poetical termination in the walls of Mexico!

Art. II.—NEW PRODUCTS FOR THE SOUTHERN COUNTRY.

The Vine.—The Cork.—Camphor and Flax.

The very elaborate, learned and useful treatise on the cultivation of the olive, presented to the South Carolina Agricultural Society by the

Hon. Mitchell King, and noticed in our March number, has suggested to our minds some other products suited to the southern country, that might be cultivated advantageously south of 35° in soils suited to their growth and full development.

And first, the vine will flourish wherever the soil is calcareous and the atmosphere not too moist. In small vineries it is easy to add lime or bone manure, so as to furnish the carbonates and phosphorates this plant requires; but in large vineyards the calcareous principle must be in the soil itself, or the culture rarely succeeds, and even if the vines are reared they produce an inferior wine. If we trace the vine-growing region of Europe, we find the best wines are produced in limestone ranges. Indeed, it is not uncommon to find extensive enclosures surrounding a soil suited to the growth of the grape, within which the wine produced is worth two or three dollars a gallon, while that made from grapes grown immediately outside the walls, although attended with equal care, and manufactured with equal skill, is not worth more than ten or at most twenty cents a gallon. Volcanic soils, from the peculiar salts with which they are impregnated, are likewise well adapted to the culture of the vine. It will be seen, therefore, that before any attempt is made to establish extensive vineyards the soil should be analysed by a competent geologist.

A dry atmosphere is likewise important, for it has been found that where great moisture prevails the foot stalk becomes woody before the fruit matures, and the berries in consequence rot or fall off.

It is not our province or our intention to say anything here of the best method of cultivating the vine. There exist many excellent popular treatises upon the vine which contain abundant information on the subject to which we refer our readers, contenting ourselves with observing, that without judicious trimmings and high manuring, good sound succulent grapes cannot be produced.*

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* The vine is indigenous to Persia, but a product of most temperate climates. It was early introduced into Greece and Italy, and into France by the Phonecians. In North America it was found growing wild, and may be cultivated in most parts south of the 38° of latitude. One of the prominent objects in the colonization of Carolina was the cultivation of the grape, and it was also insisted upon very early in Louisiana, and afterwards in Alabama. See "Locke's Constitution of Carolina," "Martin's Louisiana," "Meeks' Address and Reference to French Colony in Alabama."

Every classical scholar remembers with delight the favorite Falernian and Cecuban wines; the wines of Lesbos and Chios, of which Greek and Roman poets have sung so sweetly, and which they regarded as from the Gods. The vine was cultivated in Britain soon after the invasion of Cæsar, and extensive vineyards existed so late as the time of Richard II. It is now found only in hot houses in that country. Of the native American grapes may be mentioned the Fox Grape, so well known to us, the Little Summer and Chicken Grape, and the Ball Grape. This last is a

The next article to which we would call the attention of the southern agriculturalist is the cork oak, (*Quercus Suber.*) We have never seen this tree in the interior of the south of Europe, but have frequently observed it on the coast of Spain, Portugal and France, stretching out its long branches in a manner that reminded us very much of the live oak plantations of our own maritime States. The tree begins to yield the cork at fifteen years, and continues to produce to a great age. The stripping of bark which is used in manufacturing corks, does not injure the tree at all; it may be done every five years. Loudon says "it is taken off in sheets or tables much in the same way as oak bark is taken from standing trees in England. After being detached it is flattened by presenting the convex side to heat, or by pressure. In either case it is charred on both surfaces to close the transverse pores. This charring may be seen in bungs and taps, but not in corks, which being in the long way of the wood, the charring is taken off in the rounding."

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spontaneous product of most of the southern States. The Scuppernon, which produces a fine wine is cultivated in North Carolina, and Mr. Sidney Weller, of Brinkleville, attributes the great success of the vine dressers in North Carolina to the fact that attention has been bestowed solely upon American kinds, and those of approved quality, the first class embracing such as are good and profitable in all respects, and from which not only gallons but barrels of wine are made. The Scappernong has attained already very high celebrity, is a native of North Carolina, and flourishes south of 37½° latitude. See "Alabama Planter," vol. I., No. 221.

Of the foreign wines principally in use may be named the *Port*, so called from its place of shipment, Oporto. Almost all this wine which is shipped is greatly adulterated with brandy. *Sherry*, a product of Spain, in the vicinities of Cadiz; it is generally much adulterated. *Claret;* the most famous being the Lafitte, Latour, Chateau Margaux and Haut-Brion, the first being in highest esteem. *Champagne*, named from the province making it, the Silery being most esteemed; the trade in this wine is carried on principally at Rheims, Avise and Epernay. *Burgundy* is esteemed as among the best in the world, and extensively grown. The question of preference between it and the Champagne was long and ably discussed. The product of all the vineyards of France was estimated in 1831 at £21,000,000 sterling. *Madeira*, introduced into the island of that name in 1421, it has lost much of its popularity in consequence of frequent frauds practised upon it. The Malmsey is a favorite variety. The *Teneriffe* is an inferior wine. The German are the growth of the country about the Rhine and the Moselle. The *Tokay* is from Hungary, and very costly. The wines from Sicily are principally the *White;* those of Italy have little character as an article of commerce. The wines of Greece and Cyprus had formerly much celebrity.

The quantity of wine imported and received for home consumption in Great Britain in 1835, was 6,420,342 gallons; being of cape, 522,941; French, 271,661; Portuguese, 2,780,024; Madeira, 139,422; Spanish, 2,230,187; Canary, 56,956; Rhenish, 48,696; Sicilian, 376,455. The import the same year of raisins was 169,366 cwt., and grapes of the value of £16,765. The value of wines imported into the United States in 1844–5, was $1,500,000, mostly consumed here, of which the Champagne was largest in value, and claret next. The import of raisins were about $700,000. Vide "Hoar on the Cultivation of the Vine," "Henderson on Ancient and Modern Wines," "McCulloch's Dictionary," "Commercial Review, December, 1846," etc.—EDITOR.

There are many proprietors in the neighborhood of Bordeaux and Bayonne who derive a revenue of twenty-five thousand to thirty thousand livres, (from five to six thousand dollars a year,) from their cork oak groves. The acorns may be procured from thence. They should be packed in wet moss, and allowed to germinate on the passage, after being quite dry they rarely sprout. They would grow, we believe, throughout the whole region of live oak, and would require very little attention or after-culture when once well set.*

Another plant which might be introduced at the south, and which would doubtless prove profitable, is the *Laurus Camphora*. The fourth bulletin of our National Institute† contains an admirable report of that distinguished naturalist, J. C. Reinhardt, in which he gives a succinct and useful notice of the principal plants cultivated in Borneo, Sumatra, Japan and China. In speaking of this plant, he says: "Nearly all the camphor exported to Europe and America is obtained from the *Laurus Camphora*, a tree which grows in China, Japan and Formosa. The tree, including the roots, is cut into small pieces, and boiled, the sublimed gum being received into inverted straw cones, it is then made into grayish colored cakes of a crumbling consistence, and brought to market.

It is purified by the Dutch, and offers a profitable article of commerce. The younger Michaux, in addressing the writer, says: "I have frequently and unremittingly urged my friends in Charleston to

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*"The cork is the spongy bark of a species of oak, and abounds in the south of France, Spain, Portugal, Italy and Barbary. The tree attains thirty feet height; its removal does not injure the tree, which lives to very great age. The cork was known to the ancients, and used for stoppers. The Spanish corks are best. The imports of all varieties into Britain are estimated at two to three thousand tons, in value £70,000 to £100,000. Imports into the United States 1845, $90,862. Both public and private interest, according to Michaux, requires the inhabitants of the southern coasts of the United States, and especially of the neighboring islands, to introduce and rear the cork oak in places unfit for the culture of cotton. It will grow wherever the live oak is found.—EDITOR.

† The National Institute has wisely devoted one department to agriculture. In his address at the meeting in 1840, Mr. Poinsett remarked: "This institution has allotted one entire division to Agriculture. This must be considered the most important, as it is the most necessary of the useful arts, as well as the most essential to our existence in a state of civilization. The hunter or the shepherd can do no more than supply himself and his children with his food. Such a people have no surplus for those who follow other pursuits; whereas in an agricultural community a portion of the people only are engaged in raising grain and cattle to supply the remainder with food, who, in their turn, are employed in the useful or fine arts, or in the pursuits of literature and science, and it may be safely asserted that the degree of civilization in any country will be in proportion to the perfection of its agriculture. Cicero says 'there is no better pursuit in life, none more full of enjoyment, or more worthy a freeman,' and surely there is none which contributes more largely to the wealth and independence of a country."—EDITOR.

cultivate the *Laurus Camphora*, camphor tree, which is much less liable to be injured by the cold than the orange tree. It is not in the sandy soil of the environs of that town that this tree ought to be planted, but in the fresh swamp land eight or ten miles in the interior, where the red bay is found, to which it is analagous. The *Laurus Camphora* might very well be grafted upon this tree, but it is commonly found in all the nurseries around Paris, where it is sold at five francs (one dollar) a plant of thirty inches high. This tree reaches the height of forty and fifty feet. What an acquisition it would be to the southern parts of Georgia and to Florida!" We hope the experiment will be made and this valuable plant generally introduced into the southern States.*

But the plant which we would recommend most earnestly to the attention of the Southern cultivator, is the New Zealand flax, (phormium tenax.) It was first brought to Europe by the naturalists who accompanied Captain Cook in his voyage of discovery in the Pacific, in 1775, It is thus spoken of: "One plant in particular deserves to be noticed here, (New Zealand,) as the garments of the natives are made from it. A fine, silky flax is produced from it superior in appearance to anything we have in this country, (England,) and perhaps as strong. It grows in all places near the sea, and a considerable way up the hills, in bunches or tufts, bearing yellowish flowers on a long stalk."

Capt. Wilkes in his narrative of the United States Exploring Expetion, says, "The native hemp, (phormium tenax,) is a most useful plant. It grows in large quantities, and is applied by them, (the natives) to many purposes, besides being a principal article of foreign trade. It is an important material in the construction of their houses, for which purpose it is made into cords, that are also used for other common uses. It is manufactured into fine fishing lines, which we much admired at Sydney for their strength and beauty."

"The manufacture of the hemp is altogether performed by the women, who cut it, and, after it has been dried a little, divide it into strips

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* Camphor is obtained by boiling the *Laurus Camphora* timber of China. The export from China is from 350,000 to 500,000 lbs. Small quantities are exported from Batavia of Japan Campor. A better quality is produced from the forests of Sumatra, Borneo and Malay, but never reaches European markets. "The camphor tree" says Johnston "belongs to the same family as the common sassafrass of the United States, though in its general character it is most nearly related to the red bay, so common throughout the southern country, both being evergreens of similar height and at a small distance looking so much alike as to be easily mistaken for each other." The value of camphor imported into the United States has increased from $22,000 in 1835 to $143,536 in 1845.—EDITOR.

about an inch in width. The outer green fibres are then scraped off with a piece of glass or a sharp shell. The inner fibres being thus exposed, are easily separated, and the greatest care is taken to keep all the fibres straight as possible, both in this and the following operations. To this precaution the great strength of the cordage the natives make of it is owing. After the fibres are separated they are washed, rubbed, and laid in the sun to bleach."

Capt. Wilkes says nothing of the garments of the natives being made of this material, which they are for the most part, and he is mistaken when he attributes the great strength of the cordage to the peculiar manner of dressing this description of flax. If he had referred to the experiments of La Billardiere, he would have seen that the fibre of this plant is much stronger than any vegetable fibre we know of. La Billardiere found that the fibre of the agave americana breaks under a weight of seven; that of flax, eleven and three-fourths; that of hemp, sixteen and three-fourths; that of New Zealand flax, twenty-three and seven elevenths, so that the phormium is very much the strongest of known vegetable fibres, and is only exceeded by silk which reaches twenty-four. The English are well aware of its superiority for cordage, and so long ago as 1831 they imported from New South Wales 1,065 tons of it per annum, the market value of which was from £15 to £25 a ton.

We believe that this plant will succeed best in rich swamp soil, although Captain Cook saw it growing luxuriantly on the hill sides. It may be propagated by the offsetts which it throws out at the roots, but no doubt it will produce seed in the southern country which will afford a simple and easy way of propagating it. The phormium has been found to bear the winters of Ireland and the south of England, and is quite naturalized in Provence, France, where it bears seed.

Loudon, in his Encyclopedia of Agriculture, says of this plant, that in New Zealand, "The phormium tenax answers all the uses of hemp and flax." "There are," he says, "two kinds of this plant, the leaves of one of which are yellow, those of the other, deep red, and both resembling the leaves of flags. Of these leaves they make lines and cordage much stronger than any of the kind in Europe. They likewise split them into breadths and tying the strips together, form their fishing nets. Their common apparel, by a simple process, is made from these leaves, and their finer by another preparation from the fibres. This plant is found both on high and low ground, in dry mould and in deep bogs, but as it grows larger in the latter, that seems to be its

proper soil. It has lately been found to prosper in the south of Ireland."

The phormium would doubtless succeed in the rich bottoms of the Mississippi Valley, and would add another to the many valuable products of that favored region, and would prove a valuable acquisition to our national and commercial marine.

We recommend its introduction to Southern planters even where it may not be thought advisable to raise it for sale. The leaves form strong and durable baskets, plough lines, and such cords as we daily use on a farm, and may be fabricated by any common laborer. Offsets of this plant may be procured from France at a cheap rate, and from the nuseries in our Northern States at from twenty-five to thirty cents a plant.*

We should be much gratified to find this valuable plant added to the staple productions of the South. The prosperity of this portion of our country would be greatly promoted by the introduction of a greater variety of products. A thriving and uninterrupted trade cannot exist without such a variety of articles of exports as will form an assorted cargo at all seasons, and this deficiency cannot be compensated by any single staple however valuable.

We believe that the products of the olive and the vine, the cork and camphor trees, and of the New Zealand flax, added to our cotton and rice, would furnish all the variety which the most active commerce demands, and that their introduction would largely contribute to the permanent prosperity of the South, We therefore earnestly recommend their culture to our friends south of 35°.†

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*The New Zealand flax," says McCulloch, "exceeds every other species in strength of fibre and whiteness, qualities which, if it really possesses them in the degree stated, must make it peculiarly well fitted for being made into canvass or cordage. It has been obtained within these few years at second hand from Sydney and Van Diemen's Land, the imports from them having amounted in 1831, to 15,725 cwt." Attempts are now making, but with what success remains to be seen, to raise it in this country.—Ed.

† To the products enumerated by Mr. Poinsett, might be added the *Colza*, a plant extensively cultivated in Flanders and in France. It is admirably adapted for the food of cattle. It also, after expression, yields a cake which is highly prized for fattening animals or manure. There is a spring variety of this plant which will succeed in almost any part of the U. States, and may ultimately become an article of very considerable importance. The oil of the colza is much used in Europe, and highly prized. In France it has been adopted for all the purposes of light-houses. Messrs. Bache & Jenkins, who were sent to Europe by our Government last year, to obtain information upon these subjects, make in their report some remarks which we leave with the reader after referring him for further information upon "New Products" to the paper by Mr. King on the "Olive," in the *Commercial Review*, March, 1847, and the paper of the Hon. Henry Wise on several other subjects in same number:

"They burn in the English, Irish and Scotch lights 'the best winter bagged sperm

Art. III.—THE DELTA OF THE ALABAMA.

THE application of the principles of inductive philosophy to geological research, has so simplified the science and facilitated the labor of investigation as to render it an object of much practical utility. By this means, in connection with those interesting developments which have been made in a region hitherto concealed from observation, the science has commended itself to the favorable notice of almost every class of the community. It is therefore not surprising that so large a share of individual effort should be enlisted in this department of knowledge, so replete with the means to gratify the curiosity and reward the industry of its admirers.

The many who are thus devoted *docti et indocti*, may, for aught that is presumed, realize the fulfilment of their largest expectations. But it must not be forgotten that "there is nothing truly valuable to be obtained without pains and labor." Although the science owes its present advancement in a great measure to the suggestions of a humble

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oil;' and in the French, and most if not all of those of the northern commercial nations, 'the best purified and clarified colza, or rape-seed oil.' The difference in the price of these oils in Europe is ordinarily very great, and to this difference may be attributed in some measure the greater expense of maintaining the British lights. The subject has been attracting the attention of the Trinity board for several years past; in consequence of which experiments have been made both in light-houses and in London, under the direction of a scientific person, to test the relative advantages of the two oils. The results of these experiments have been sufficiently favorable to the colza to warrant us in the belief that it will be generally employed in the British lights at no distant period. We witnessed the experiment at one of the light-houses in which four of Wilkins' catoptric lamps, with the colza, were employed by the side of Argand lamps with sperm oil. We also witnessed a similar experiment at the shop of an artisan in London, at which two lamps were employed. On both of these occasions the difference in the flames, to the eye, was very perceptible, the colza producing *much the whitest and brightest light.* It is also asserted that there is less difficulty in keeping the colza oil liquid in winter, and any impurities that may be in it are more easily detected than in the best sperm oil. It is presumed, however, there would be very little economy in substituting the colza for the sperm oil now in general use in our light-houses—at least not to the extent that it produces in Europe, where the sperm is comparatively very expensive, but if it produces a better light is more easily kept in a proper state for burning during the winter season, and the impurities arising from the mixture of other oils with it more easily detected, then there can be no reason why it should not be introduced; and with a view to that end, we respectfully suggest the propriety of having a series of experiments made upon it and other oils by some competent person. The vegetable from which it is made might be, without doubt, cultivated to advantage in the United States, particularly if in the course of events any thing should occur to break up or render unproductive, our whale fisheries in the Pacific. The subject is one which we deem of considerable interest and importance in several points of view, but especially in that which refers to it as a better combustible for illuminating purposes than sperm oil of the finest quality. We are strongly impressed with the belief that to this oil as much as to the fineness and superiority of the illuminating apparatus, may be ascribed the high reputation, not to say the superiority to all others, of the French lights."

and obscure individual, yet all that has since been done in the way of its improvement, whether in respect to speculative or practical detail, has been the result of profound and laborious research. It is, however, an easy matter to theorize on geological subjects; we have already had enough of this learned trifling, and it has required no small effort of the more enlightened philosophy to clear away the rubbish of this kind which had accumulated to such a degree as to conceal from observation those interesting monuments which furnish the only true record of the earth's history. But the rigid and judicious application of correct principles is not so easy a task, much less the diligent and patient examination of facts for the establishment of correct data, "*hoc opus, hic labor est.*"

To avoid the folly of our predecessors we have deemed it prudent to pursue a less aspiring course, by simply extracting *from our note-book* a few actual observations on the geology of the delta of the Alabama, presuming they may not be irrelevant to the purposes of science. The first particular which claims our notice, is the inclination of the strata. Such, however, is the soft and adhesive character of the clay masses which compose these deposits, that it is not possible to determine their dip by direct observation. There are a variety of deposits, differing more or less in their mineral aspect, and exhibited in apparent succession along the banks of the water courses at distant intervals, but their continuity is somewhat uncertain, inasmuch as they may be relied upon; they indicate a dip at a very small, perhaps evanescent angle. The subjacent beds of the lower tertiary, where they disappear beneath the clay formation, about fifty miles above Mobile bay, show an inclination not exceeding five degrees; but this is a decreasing angle towards the south, hence an imperfect conception may be formed of the amount of dip these superficial deposits sustain at any given point.* The direction of the dip does not vary much from a southwest course, as appears from the relative bearing of the strata in lateral situations on the two principal water courses. The almost entire absence of fossil remains in these argillaceous beds, renders their geological situation in the series somewhat uncertain.

We made a very thorough investigation last summer, particularly in the neighborhood of the calcareous beds, in order to ascertain whether any miocene or pliocene fossils were to be found in them, but without success. The geographical boundary between the two formations on

* The centre of elevation being the highlands in North Alabama, the greatest inclination of the stratified rocks will be in the vicinity of these elevated masses.

the Tombigbee, is near the lower salt-works; on the Alabama the white limestone drops out from beneath the clay beds; at French's landing, where, as usual, it is charged with nummolites. From thence in a southern direction, there are but few indications to mark the succession of geological events. The animal and vegetable remains hitherto discovered do not differ from existing species. Our cabinet contains *unios* of the species *plicatus*, *circulus*, and several indeterminate casts, which were obtained from an excavation in the mottled clay at the depth of thirty feet, in an inland situation, sixteen miles west of Mobile.

Carbonized wood and masses of vegetable debrae are frequently found in excavations at various depths below the surface. Many such deposits are cut through by the principal water courses; they occur even near the borders of the limestone, and no doubt deposits of this kind which are now forming in and around the head of Mobile bay, will, ere long, form an integrant part of the same alluvial series. Another remarkable feature peculiar to this formation, and distinct from the former, consists in those numerous grathodon beds that mark the close of the series of geological events preceding the emergence of this delta. These deposits are found scattered over the surface in various situations between the bay and the fork of the Tombeckbee and Alabama. Almost the entire mass of these shells consists of the species *grathodon cuneatus*, which also exists in a fossil state as far north as the mouth of the Chesapeake,* but is found living only in the bays and estuaries of the gulf of Mexico. The remainder consist of *neritae* and *cyrenæ*, which are also estuary shells, and still living in the bay.† The neritae occur more abundantly, if not exclusively, in the older beds of the interior, but the cyrenæ appear to be limited to the more recent deposits nearer

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* The *grathodon cuneatus*, which is now found living only on the coast of the gulf of Mexico, is an estuary species, requires brackish water for its prosperous existence. Although in some instances it is found in fresh water, it does not continue to flourish in such situations; it inhabits soft alluvial bottoms in two or three feet depth of water, and is slightly buried in the mud. The animal is not remarkably hardy, extreme changes of temperature and various other causes are liable to prove fatal to its existence, the shell itself, though thick and apparently firm, is subject to disintegration, the *umbos* in a mature state are generally decorticated.

† The *cyrenae* is usually found cohabiting with the *grathodon cuneatus;* for its habits are similar, but is much more limited in the number of its species. The *nevita* or *univalve*, is also an inhabitant of brackish water, but very different in its habits from the former. It is usually found attached to solid slimy substances, particularly decayed timber, and near the surface of the water; it shuns the clear limpid stream. The *cardium*, *unio*, and *ostrea* are also found imbedded with the *grathodon cuneatus*, but they occur too seldom to be regarded as the effect of any natural cause, their existence in such circumstances must rather be attributed to Indian agency.

the bay.* The largest of these beds, with few exceptions, occur in the most inland situations, where they are found seven or eight hundred feet in length, with an altitude of twenty. They are superficial deposits in an undecomposed state; those of the interior usually lie upon a bed of clay, while those in the vicinity of the bay rest upon sandy or muddy bottoms. Their form is generally very eliptical, having the longest axis parallel with the direction of the current. A thin deposit of dark colored pulverulent earth generally overlies and extends through the mass, forming an excellent soil for cultivation.†

These testucea appear to have been much more numerous at a former period than the present. The maximum of their increase must have been at the period the oldest beds were formed, since then their numbers must have been diminishing. This diminution may, in part, be attributable to the swollen state of the rivers and the prevalence of northerly winds during a large portion of the year, thereby causing the bay to become too fresh for the prosperous existence of these mollusks. Previous to the elevation of the more ancient of these shell beds, there was probably no obstruction as at present existing at the entrance of the bay to prevent the free ingress of the tide from the gulf. This cir-

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* It seems that the circumstances favorable for the co-existence of these species in the same situation, did not always concur; the case in which the *cyrena* is excluded is the most remarkable, for its habits are not known to differ essentially from the *grathodon cuneatus*. But the peculiarities of the *nevita* are such as to render it rather an accidental associate in these beds. It is, however, a matter of surprise that it is confined to the more ancient beds.

† The common oyster on the coast of Maine, occurs fossil in similar circumstances as the *grathodon cuneatus* on the coast of Maryland. The former *testacea* has become extinct or nearly so in all places north of the Delaware. On the coast of Maine it is decidedly an exotic. The most northern point where the living oyster is found is at Portsmouth, N H. The few that are found here are in five fathoms of water; were it not for their location at such an extraordinary depth, they would no doubt ere this have been destroyed by the severity of the climate, and even this advantage cannot long preserve them from extinction, as they are rapidly degenerating. An experiment was recently made by one experienced in the business, by planting in this bay a quantity of healthy oysters in the most favorable circumstances, but the result proved unsuccessful. The imperfect growth acquired was very unnatural, it consisted of a very thin lumination around the border of the shell, which annually disappeared, and the animal itself deteriorated. Planted oysters succeed better in more southern situations, as at Cape Cod and Long Island Sound. There are, indeed, but few comparatively that are found in a native state north of the Delaware. But that they were once indigenious on the coast of Maine is evident, for in a peninsular situation at the head of Damariscotta bay I recollect finding in 1826 a large deposit of these shells. They were imbedded beneath a mass of earth two feet in depth, on which grew a dense forest of the largest oaks. The body of oysters themselves is on a level with the surrounding water, which is permanently fresh. May we not infer from this fact that the temperature has undergone a material change since this deposit was formed, and may not also the gradual extinction of the *grathodon cuneatus* on the southern coast of the United States be attributed to a similar cause? The subject is worthy of investigation.

cumstance, together with the increased limits of the bay, would have rendered it much less subject to the diluting effects of fresh water tributaries. Other causes may exist which will eventually exterminate the species from the coast; at least some such presumption seems requisite to account for their present paucity, which is such as to render it inconceivable how such large quantities as are found in a fossil state, could be accumulated in the present epoch.

In a late communication we received from Mr. Lyell on this subject, he attributes the existence of certain beds which came under his observation, particularly at Lake Pontchartrain and the mouth of the Mississippi, "to some change in the heighth of the tide, or the former heaping up of a beach by the action of the waves, without any change in the relative level of the sea or land."

Though it is not our intention to question the correctness of this opinion in reference to those particular instances, yet we are induced to believe that the agencies concerned in producing the beds in the Mobile delta were somewhat different from the preceding. It is true that in the latter case, many of the beds are littoral, but the circumstances connected with their situation in other respects are such as to preclude the possibility of their being formed in the manner of raised sea beaches. Besides, a large number of these beds occur in situations remote from any shore or headland, where they rise up like islands in the sunken region, and are themselves the only elevated spots for miles in any direction. There can be but little doubt that these shell deposits mark a successive movement of upheaval, which this platform has undergone, within a period more or less remote. Some are found scarcely emerged above tide-water, while others have attained different elevations above it, even to the heighth of twenty feet or more, The more elevated of these masses usually occur in inland situations, answerable in most respects to the probable limits of the former estuary. One of the latter kind may be seen at fort St. Phillip, about twenty miles north of Mobile. The land here is elevated fifteen feet above the water, extending along the western bank of the river, and bounded above and below by a sunken morass. The bed in question is situated on the southern extremity, and rises two or three metres above the ordinary heighth of the bluff.

The *gnathodon* shells, as well as the *neritæ*, which are also very numerous here, have undergone a degree of fossilization which denotes an extraordinary antiquity, while on the other hand there are instances near the embouchures of the Spanish and Tensas rivers, where these

testacea retain a considerable portion of animal matter, and are hardly deprived of their epidermis. And such is the general appearance of these beds, both in regard to their situation and internal condition, as to mark with much seeming exactness, the gradual retreat of the water from what may be presumed to have been the limits of the former estuary. In connection with these fossiliferous indications it may not be improper to refer to certain lithological facts which seem to have a bearing on the object of our investigations.

The formation, however, presents but few traces, either of regular or distinct stratification. The red and mottled clays are predominant through the entire series.* The other deposits are nuceous, or loamy, with their various mixtures and hues, are generally of an exceptional kind, indicating such temporary conditions as cannot be relied upon beyond a very limited extent. A manifest distinction, however, exists between the general character of the superior and inferior beds. In the former the red and mottled clays abound almost exclusively, while in the latter yellow, white and blue sand, with occasional intermixtures of gravel and shingle, form a distinguishing feature. The arenaceous beds have in several instances been penetrated by boring in Mobile. The yellow sand usually occurs first, and probably owes its tinge to the superincumbent feruginous clay. One of these experiments was made at Gordon's buildings, near the head of Mobile bay. The operator states, that after boring through a bed of loamy earth, at the depth of one hundred and twenty feet, he penetrated a mass of vegetable debrœ, which emitted a fetid odor, beneath which was a bed of blue sand, where the experiment terminated. The entire mass of the water-cuts at fort St. Phillip, Chastang's and Sizemore's bluff, consists of red and mottled clay. At fort Stodder, a few miles above the source of the Tensaw river, a bed of blue clay forms the base of the bluff, succeeded upwards by white and feruginous sand, with intermixtures of silicious

* It cannot escape the notice of the most superfical observer, that feruginous ingredients form the most striking feature of this formation. But by what rules of geological induction this should ever have been considered as the criterion above all others, to determine the relative position of these beds, is quite inconceivable. For of all the materials which compose the earth's crust, the oxide of iron, in one form or another, is perhaps, the most generally diffused. And the various circumstances in which it exists, whether as a pigment, modifying the hues of almost every other species of mineral substance, or as concretionary matter causing these substances to adhere in every possible variety of combination, or as a fundamental ingredient becoming itself a component part of these combinations, clearly evince that it is not peculiar to any formation. Take this mineral in any possible form whatever, suppose in that of *tubular concretions*, as the type of any particular formation, by the same method it will not be difficult to prove the synchronism of the most separate events in the earth's history.

pebbles. Near the cut-off, yellow sand makes its appearance. At a bluff two miles above this, on the Alabama, the subjacent bed is blue sand, with white and mottled clays above.

At Choctaw bluff, the lower stratum is blue clay, succeeded upwards by white and yellow sand and the superficial clays. A few miles above this, at French's landing, the white limestone crops out from beneath the clay beds. The whole series is remarkably destitute of calcareous ingredients. This circumstance, together with the homogenous character of the beds as respects both their mineral and fossil contents, identifies them as one connected series of geological events, and at the same time distinguishes them from the subjacent eocene formation.

It is presumed the vertical dimensions of these beds at Mobile will not vary much from two hundred feet. From a review of the preceding observations, it seems probable that this platform is an old delta, upraised so that the present existing channels have cut through it, denuding in many places the ancient fluviatile and marsh mud, with its drift wood and other vegetable debræ. It has no doubt undergone very modern changes of level. The limits of the former estuary may have been as far north as the junction of the Tombeckbee and Alabama, and possibly near the border of the limestone beds.

The geological date of these events is not so easily determined. The organic remains hitherto obtained are very limited in regard to species; they are all, however, identical with existing forms, and imply a condition of things in no respect different from that of the present geological epoch. They also comport with the presumption indicated by various other considerations, that the whole formation is of alluvial origin.

Art. IV.—ATLANTIC AND PACIFIC RAILROAD.

The demand for an easy transit of the commerce of the two oceans across the continent of America, has been annually increasing until the time seems to have arrived when it *must be accomplished.* Several routes have been proposed for railways, and two, at least, for ship canals. We propose in the course of this paper to show that, while either or all of the routes proposed would be of great value to the commerce of the world, the line from the Atlantic coast, at points east of the Florida penininsula, to Mazatlan, at the mouth of the Gulf of California, is, for many reasons, the best yet proposed.

During the past eighteen months, the perils of the navigation of the

Gulf of Mexico seem to have vastly increased. This has always been justly regarded as the most dangerous of seas, both on account of its violent hurricanes and its thousand shoals and island breakers. Within the period alluded to, there have perished in its waters about one hundred and fifty vessels, at an average value of $10,000, and with cargoes of a mean value of $30,000. The loss of property, then, by the dangerous navigation of the Gulf of Mexico, in eighteen months, amounts to $6,000,000, to say nothing of the value of one thousand human lives sacrificed with the property.

If commerce pays an annual tribute of several millions of property and a thousand human lives to the dangers of Gulf navigation, with its present commerce, she should seek some means of avoiding those waters in any new route which proposes to connect the trade of two great oceans. This is a general reason, sufficient, probably, to commercial men throughout the world. To us, of this great and prosperous nation, there is a more powerful reason why the route should not pass through the Gulf of Mexico.

The Mississippi Valley comprehends a larger extent of fertile, cultivatible lands than the same area in any portion of the world. Upon a careful computation of the extent of the valley, I give it at 1,320,000 square miles.* Seven-eights of this area is habitable and cultivatable, the greatest proportion of it yielding luxuriantly the products necessary to human subsistence and happiness. Only one half of this area is included in the States, (omitting Iowa and Wisconsin,) and its population is but about 8,000,000, whereas its capacity to sustain 100,000,000 within the present organized States, may not be questioned. The whole valley, when its resources are developed, will sustain a population of two hundred millions of souls, furnishing them the comforts and even the luxuries of an independent and happy people.

To populate rapidly this vast extent of idle domain, and to assume among the nations of the earth the proud position which great population, great wealth, and great enlightenment must command, is our highest interest. While we would benefit the commerce of the world, then, by connecting the trade of the two oceans, and ensure to ourselves an easy and rapid transit to our distant possessions on the Pacific, let us bring that commerce through the valley itself, empty what we need into its lap for distribution to its distant extremes, and retain from that we do not need the compensation for its transport by a shorter route than hitherto known.

* Mr. Darby, the venerable American geographer, estimates the valley at 1,220,000 square miles, with a circuit of 6,100 miles.

The question at once presents itself what work would answer these vast purposes, and by whom and how shall it be constructed?

The answer I propose is, *A great railroad from the Atlantic at Savannah and Charleston to the Pacific at Maza lan, near the south extreme of the Gulf of California*, to be constructed by private stockholders, the United States being a shareholder, for military, mail, and other national purposes.

The American public are familiar with the magnificent scheme of Mr. Whitney, who proposes to the Congress of the United States to construct such a road from Lake Michigan to the mouth of the Columbia river, a distance of two thousand four hundred miles, for the land lying on either side of the road, sixty miles in width. The cost of constructing and completing his road, he estimates at $65,000,000. The land at $1,25 per acre, would, if all sold, raise a fund of 113,000,000; but supposing only three-fourths to be saleable, it would produce about $70,000,000 as a government contribution to the work.

Giving to Mr. Whitney the credit properly due, of a man of great energy, forecast, and practical knowledge, there are still strong reasons to be urged why the southern route proposed is more feasible. They should be briefly presented here.

1st. The railroads now in progress from the Atlantic at Charleston and Savannah, are rapidly approaching the Mississippi river, and will ere long connect with it at Vicksburg and perhaps Natchez, in the State of Mississippi, and at Memphis in the State of Tennessee. Connection between the Pacific or Atlantic and the Mississippi, at any one of these points, will answer all the purposes for the entire valley, as the navigation to and from these points is never interrupted.

2nd. The distance from the Mississippi to the Pacific, say from Vicksburg, Natchez, or Baton Rouge, to Mazatlan, is not more than 1,500 miles by the route I propose for the railroad, whereas Mr. Whitney's route is 900 miles greater; certainly an important item.

3rd. The cost of construction per mile, will be much greater on Mr. Whitney's route, because of the vast mountain barriers after reaching the summit at the South Pass. The distance from that point to the ocean, will cost more than the whole road by the southern route.

4th. After its construction, say twenty-five years hence, during a considerable portion of the year it would not be available. The severe winter weather and deep snows will render it impracticable for two or three months of each year, whereas the southern route

would be continually practicable, and travel upon it very pleasant at all seasons of the year.

5th. The northern route must always be liable to the difficulty of passing through an uninhabitable region for a long distance, whereas the southern route is populated at the present time, with a few intervals of not more than one hundred miles, and these intervals, all but one on the table land of Mexico, at least habitable at points after the construction of the road.

6th. It is highly probable that the southern route will pass through a region rich in mines, and the construction of the road through the only rugged portion of the route, (the last 400 miles,) pay for itself in the precious metals laid bare by the excavation.

The chief difficulty which formerly presented itself, and which rendered it very doubtful whether we should be able to realize our hopes of a connection between the two oceans by a southern route, was to secure the assent of Mexico. We now have it in our power to avoid that difficulty. We are at war with Mexico, and probably *shall dictate our own terms of peace.*

The right of way for a railroad through such region of Mexico to the Pacific, as we see desirable, should by all means be exacted. There is nothing unreasonable in the exaction, because the work would be of vast value to Mexico, developing her resources, introducing commerce, and furnishing a market for her productions. I would urge it in the most earnest manner, upon the attention of the executive, that the *right of way*, in some form, be demanded, and constitute a *sine qua non* in our treaty with that republic. As neighboring land proprietors owe to each other and to the public the right of way to and from the the great highways and water courses, so do neighboring nations owe this servitude to each other, even when each has domain of her own reaching such highways, provided that domain does not offer the shortest and best route.

Mexico has not at present a single work of the kind in her vast domain, nor has she sufficient enterprize to construct a railway or make any other great work. The roads, some short routes excepted, are as miserable as the nature of the ground can make them. There are few coach routes and few coaches or wheel vehicles for want of them, in Mexico. Their mules pack their merchandize from the distant seaports to the great interior cities, and their journeys are often most circuitous and expensive. As an item, the great amount of quicksilver used in their mines, even in the provinces touching the Rio Grande, is for some pretext best known to Mexicans, packed upon herds of mules from Vera Cruz,

(where it is landed from Russia and other foreign countries,) to the *city of Mexico*, and thence disbursed to the distant departments by a whole journey of about one thousand miles. Since we have had possession of the country our steamboats have found their way up the Rio Grande to a point within two hundred and fifty miles of some of the richest of those mines. But no steamer had ever before entered that river, at least, beyond Matamoros. We find some seven hundred miles of navigable channel in that river which Mexico had never used, though she had a population of more than a million dwelling upon its waters. Mexico needs our aid in developing her resources. The steam engine is a better instrument for this purpose than the sword.

Should the principal route be constructed, it would not be long before lateral routes would be built connecting the best mining and agricultural regions with the great outlet.

But in addition to the thousand advantages to commerce of a great railroad through the continent, we should immediately have the telelegraph's wires stretched along the same route, and thus give a kind of omnipresence to all the news of the continent and the two ocean shores.

Again I repeat, *let us demand the right of way from Mexico.*

The exterior commerce which would pass over this road is given by Mr. Whitney from the Pacific, thus:

	Value.	No. Ships.	Tonnage.	Men
China, - - -	$8,000,000	50	21,204	913
Dutch East Indies, -	538,000	10	3,944	160
Spanish Islands, -	633,000	9	4,025	150
British East Indies, -	1,276,000	26	9,500	418
In the Pacific,	———	192	70,600	4,685
	$10,447,000	287	109,273	6,326

The following extract from Mr. Whitney's Memorial to Congress will better illustrate the statistical view of the road's importance than any I could present. This will be borne in mind, however, that all the expenses of transportation to the Mississippi Valley, on his route, from its greater length, will be thirty per cent. greater than on the southern route, and the cost of transportation from ocean to ocean full forty per cent. greater.

"The above are entries at the customs, except in the Pacific, which are clearances, a greater part of which are engaged in the whale fishery, and altogether only about one-third of the amount of tonnage engaged in that important branch of commerce. The exact value of the returns of the 192 ships could not be ascertained. The whole import during 1845, of the whale fishery, was estimated at $8,300,956. The whole number of vessels employed, January 1st, 1846, appears to be 736; tonnage 233,149; officers and men employed, 19,560; estimated

value, $29 440,000; a greater part of which vessels cruize in the north Pacific; they are some two, three, and four years absent. With this road in operation, it would require but *eight* days to transport a cargo of oil from the Pacific to the Atlantic, costing half a cent per a ton weight per mile to Lake Michigan, $12; thence to the Atlantic at one cent per ton per mile, (which will be a fair price when all the roads from the different Atlantic cities are opened to this road with fair competition) for 1000 miles, would be ten dollars more, making but *twenty-two* dollars for the transportation of one ton weight from ocean to ocean. The saving of time would compel to this route, when our whale ships would be built or *all* fitted out from the Pacific shore, saving the now long and dangerous voyage around the Cape, out and home.

"The ships in the above statement, except the whale ships, would average outward cargoes to half the amount of tonnage, and homeward full; and it would be safe to estimate for both ways together, the 109,273 tons.

The English commerce which would immediately pass over this road is, with China alone, 45,000 tons; homeward *full* and outward half full, would be 67,000 tons. An accurate account of the English commerce in the Pacific, as also with India, your memorialist will be able to present to a committee in a few days, should it be necessary, Your memorialist believes that all this commerce, as also the English mail, and all passengers to and from China, as well as Calcutta, must and will pass over this road. A passage from England to China by this route would not exceed $350, which now costs by the overland route over $1,000, and not comfortable; and all extra baggage at *three pounds sterling, equal to* $15, *per hundred pounds weight.*

Your memorialst begs leave to represent to your honorable body the cost for freight of merchandize from China to the Atlantic cities on this route. From the mouth of the Yang-tse-Keang (the Mississippi or Missouri of China, and where all its foreign commerce must centre,) to the Columbia river is 6,000 miles. The freight of one ton measurement would cost $7: requiring two to two and a quarter tons measurement to make one ton weight of teas or the like merchandize, would cost to the lake, 2 400 miles, at one-half a cent per mile per ton weight, say *six dollars;* and from the lake to the Atlantic, 1,000 miles, at one cent per ton weight, would be *five dollars* more — making in all $12, for one ton measurement of teas or the like merchandize from China to any of the Atlantic cities, which varies, by ships around the Cape, from 18 to 30 dollars.

COMPARISON OF THE TWO ROUTES.

ITEMS.	*Northern Route.*	*Southern Route.*
Distance asunder of two oceans, ...	3600 miles.	2170 miles.
Portion already constructed, ...	712 "	433 "
Likely to be constructed by companies independent of either route.	400 (?)	338 "
Routes now proposed to the Government, .	2400 "	1490 "
*Distance explored, ...	1300 "	1000 "

* It is not meant that either of the routes has been explored for the road, to the distance stated. but that the topography of the country is sufficiently well known to enable us to form a tolerably near estimation of cost, distance, etc. I made a rapid

Items.	*Northern Route.*	*Southern Route.*
Estimated cost of construction of distance explored,	$20,000,000	$12,000,000
Total probable cost,	50,000,000	22,000,000
Distances not inhabited,	1400 miles.	Two intervals of 100 miles.
*Portions of the year available,	9½ months.	12 months.
Probable length of time before completion with the aid sought from the Government,	20 years.	7 years.

The geography of a country indicates with considerable certainty routes for great thoroughfares. These must either connect great commercial points, or pass through a very productive country. If both these objects can be accomplished the work will pay the better. The Apalachian chain of mountains stretches itself nearly parallel to the Atlantic ocean from the Hudson river to the Mississippi. From its summit the surface inclines in planes of various depression to the ocean, forming a country whose greatest productiveness is mainly midway between the mountains and the sea. At least it may be safely stated that the lands are poorer, population sparser, and enterprise and wealth much less known, cities excepted, towards and along the margins of the region described. A belt of pine forest, growing from a sandy diluvium or drift, bounds the Atlantic with a width varying from one hundred to one hundred and fifty miles. This is bounded by a middle vale of from one hundred and fifty to two hundred and fifty miles wide, of tertiary, cretaceous and secondary formation, very fertile indeed. The steeper mountain slope is primary, and of course less fertile formation. The head of navigation of the rivers running from the mountains to the sea, along this slope, is usually found in the middle portions. These will form each a link connecting the railway with the ocean. When these are wanting the several cities demanding such connection will construct lateral railways to the principal road, whose general range is indicated by the country as midway between the mountains and the ocean. There are already in operation twelve hundred and eighty-five miles of the route from the N. E. to the S. W. portions of the United States, at an aggregate cost of $34,208,000, or $26,621 per mile.

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reconnoisance of the southern route through Louisiana and Mississippi, and have had very accurate descriptions of the country to San Antonio, in Texas, and an account from a gentleman in Gen. Wool's army, of every portion of the route from San Antonio, Texas, to Parras, in Mexico. The country is so nearly uniform in character through the entire State of Texas and that portion of Mexico travelled by the army, as to give a very near approach to the cost of a road such as I propose.

* It is obvious that the route must be complete from ocean to ocean before it would pay well on the investment. This would require that the lakes contemplated by Mr. Whitney as a portion of his line, must be passed round by a railway, or a longer period than I have given the route, will be ice and snow-bound.

The remainder of the route, from the Atlantic to the Mississippi, lies through a country much less difficult of excavation. It will not cost more than $10 000 to $12,000 dollars per mile to construct this road, and the South Carolina, Georgia, and Alabama companies, will doubtless meet the work now progressing through Mississippi. New Orleans will be connected with it by the Mississippi, and a railway, if she desires it. Mobile will reach it by the Alabama river, and by a railway already in contemplation, directed towards the mouth of Ohio and St. Louis.

The route thence westward, through Louisiana, which I have explored and estimated, leaves the Mississippi river at Vidalia, opposite Natchez, though the cost would not differ greatly should it depart from Vicksburg or Baton Rouge.

ROUTE THROUGH LOUISIANA, FROM VIDALIA.

To Trinity,	26	miles.	Level.
Alexandria,	54	"	Chiefly level, one grade 20 ft. per mile.
Bayou Cotile,	20	"	Level,—no obstacles.
Sabine River,	50	"	Undulating,—some hills, no rocks.
Aggregate dist.,	170	miles.	Cost, per estimate, $1,500,000.

ROUTE THROUGH TEXAS, FROM LOWE'S FERRY.

To San Antonio de Bexar,	400	miles.	Country gently undulating.
Rio Grande del Norte,	150	"	Undulating, no obstacles.
Aggregate distance,	550	"	Estimated cost, $5,500,000.

ROUTE FROM RIO GRANDE, AT PRAESIDIO, TO MONCLOVA.

To Base of the mountains of Monclova,	100	miles.	Crossing one hill, not steep.
Hot Springs, along base of mountains,	20	"	Hilly route, between mountains.
Monclova,	50	"	Some hills,—no rocks.
Aggregate distance,	170	"	*Estimated cost, $2,200,000.

ROUTE FROM MONCLOVA TO PARRAS.

			REMARKS.
Monclova to Bazan,	30	miles.	Road between mountains, not crossing them.
Bazan to La Joya,	14	"	Calcareous dusty roads, W. S. W.
La Joya to Venedito,	32	"	Same surface, course W. No water. Easy mountain pass. No settlement from Castana to Venedito, 66 miles. A small river, Venedito, passes into the San Juan and Rio Grande.

* In this we have only considered the cost of materials and the construction of the road. The transportation of materials cannot be estimated, but would amount perhaps to ten per cent. on the whole cost. But labor is *very* cheap in this region of Mexico, which will probably balance this item. There are no very long intervals without settlements, and laborers are plenty at about $4,00 per month.

			Remarks.
Venedito to Sanceda,	22	"	Route chiefly barren. Sanceda finely cultivated country. Venedito here called Los Angelos, S. S. W. Mountains on both sides of the road.
Sanceda to Jarrol,	16	"	Road rough, broken with ravines, but no mountains. Bearing S. 28° W. Jarrol,—same water course, broad valley highly cultivated.
San Antonio de Jarrol to La Pastora,	16	"	Dry and barren, but pretty level.
La Pastora to Tenago,	8	"	River flows into Los Angelos and San Juan.
Tenago to Cienega,	20	"	Rough and difficult for wagons and artillery.
Cienega Grande to Lorenzo de Obaza,	18	"	Splendid valley country, producing every thing.
Obaya to Parras,	5	"	Splend.d valley country, producing corn, wheat, wine, etc.
Aggregate,	181	"	Estimated cost, $2,800,000.

Route from Parras to Mazatlan, on the Pacific.

To Durango,	220 miles.	S. S. W.	Table lands generally.
Rosario River,	70 "		Mountainous country.
Mazatlan Bay,	130 "		Along the Rosario River.
Aggregate distance,	420	Cost supposed, $10,000,000.	

RECAPITULATION.

Through Louisiana, - -	170 miles.	-	$1,500,000
" Texas, - - -	550 "	-	5,500,000
" Coahuila to Monclova,	170 "	-	2,200,000
" Coahuila to Parras,	181 "	-	2,800,000
" Durango and Sinaloa,	420 "	-	10,000,000
Aggregate distance,	1491 "	-	$22,000,000

In conclusion, it is but due to the memory of the dead to say, that the first person in the United States who suggested this route in general terms, was the late Robert Patterson, Esq., editor of the Concordia Intelligencer. Shortly after the suggestion made in that paper, in October, 1845, the writer of this paper addressed a public assembly at Natchez on the subject, and sketching the route on a large map, presented it to the consideration of members of the Memphis Convention. From many it received favor, among whom was Col. Gadsden, of South Carolina, who has endorsed it tacitly by a published map of a southern route to the Pacific.

35°
100
85°
RED RIVER
MISSISSIPI
S. C.
CHARLESTON
SAVANNAH
ALABAMA
LOUISIANA
VICKSBURGE
MISS. R.
NATCHEZ
MOBILE
GEORGIA
COLORADO
BRAZOS
TRINITY R.
AUSTIN
TEXAS
SABINE
ALEXANDRIA
N. ORLEANS
30
SAN ANTONIO DE BAXOIN
RIO GRANDE
MEXICO
GULF OF MEXICO.
FLORIDA
PRESIDIO
NUECES R.
CORPUS CHRISTA BAY
GALVESTON BAY
MONCLOVO
PARAS
PEISABLE
DARANGO
MONTEREY
COMARGO
MAZATLAN
PACIFIC AT MOUTH OF GULF OF CALIFORNIA
TAMPICO
CUBA
PROPOSED
SOUTHERN RAILROAD ROUTE,
FROM
ATLANTIC TO PACIFIC OCEANS.
..... Road Proposed.
- - - - - - - Road Constructed.

ADDITIONAL REMARKS BY THE EDITOR ON THE PROJECTED SOUTHERN AND NORTHERN ROUTES ACROSS THE CONTINENT TO THE PACIFIC. — THE IMPORTANCE OF THESE ROUTES. — EASTERN COASTS OF ASIA AND ISLANDS OF THE PACIFIC. — TRADE OF THE INDIES, ETC., ETC.

The question of the original conception of a railroad communication between the Atlantic and Pacific Oceans, we shall not occupy any time to discuss. Such is the progressive nature, of American mind, and its disposition to grasp conclusions at the very moment that premises are presented, at least so far as enterprise is concerned, we may argue that this idea of a passage across the continent, must have occurred to many simultaneously with the first successful railroad results among us. The world having dreamed so long of reaching the Indies by reduced travel, it was natural to catch at much slenderer shreds than this appeared, in support of the much desired result. It has only been within the last two or three years, however, that these several notions have attracted much interest or attention, and been regarded immediately practicably any where.

We have already done justice to the claims of Col. Gadsden, of South Carolina, of the late Mr. Patterson, of Concordia, and of Professor Forshay, in this particular, and without pausing to compare their several merits, or the merits of Mr. Whitney, we will content ourselves with some additional hints upon the general subject.*

In his Report as President of the South Carolina Railroad Company, Col. Gadsden, in February, 1846, soon after the adjournment of the Memphis Convention, remarked:

"In connection with these Atlantic railroad communications with Vicksburg, Grrand Gulf and Natchez; crossing the Mississippi at one or all of these points, roads are already projected, looking further to the west, which, uniting *on a common trunk*, in the rapid progress of southwestern expansion and emigration, will, in time, be made to course through the new acquired territory of Texas, and by the Mexican provinces to a terminus at Mazatlan, in the bay of California, or taking a more northern direction by the valley of the Red and Arkansas rivers, may easily pass by the southern gorges in the Stony Mountains, and find, in the course of events, *certain*, though *slow*, a more favored location in the imposing Bay of San Francisco, on the Pacific."

Col. Gadsden published at the same time a map showing both of the above routes, but with very little of the particularity attained in the plan which we now publish. It has, however, the advantage of showing all the great American lines of railroads completed or proposed, including that of Mr. Whitney.

E. H. Derby, Esq., in the Railroad Journal, has lately proposed a route from the gulf of Mexico to the Pacific, almost identical with one

* See Commercial Review, January and March, 1846, March and May, 1847.

proposed to us last summer in conversation, by our friend, Col. Hamilton, of this State. But we will allow Mr. Derby to state his own case:

"A superior route from the Atlantic to the Pacific, follows as near may be, the tropic of Cancer across the continent. This line protracted, sweeps by the southern capes of the two great peninsulas, Florida and California, and crosses the American continent at a point where it is less than 480 miles in width; a distance just adequate to surmount the table land by a railroad with moderate grades.

"The tropic of Cancer passes nearly over the Havana, strikes the coast of Mexico a little to the north of Tampico, crosses the northern provinces between Zacatecas, Chihuahua, thence nearly over Mazatlan, a seaport on the Pacific, much resorted to by our ships of war, thence passes over the Sandwich Islands, the great resort of our whale ships, and proceeding westward between Manilla and the Japan islands, strikes China close to its principal entrepot, the great city of Canton. The route would be nearly direct from New Orleans to Canton.

"Assuming that the length of a railroad would exceed the air-line twenty-five per cent., the whole length of the proposed line would not exceed six hundred miles; and assuming the same cost per mile allowed for Whitney's road, or $30,000, the entire cost would not exceed $18,000,000, or less than one-fifth the cost of the Whitney railroad.

"From Mazatlan to San Francisco, a line of steam packets may convey a passenger in five days, so that the weary emigrant, who is now from May to October on his journey to California, may in fifteen days from St. Louis, reach the land of promise.

"Another effect of the line would be an easy access to Chihuahua, and Zacatecas, reputed to be the richest mining districts of Mexico, and open an inlet for our manufactures into the heart of Mexico itself, by the great inland road, along the table-land from Monterey to Mexico, a connection which would doubtless repay us for all the expenses of the present war.

"Another advantage, common, however, to both lines would be secured; American ships, now excluded from the direct trade between China and most countries in Europe, could transport goods between China and the western terminus of the railroad, and thus command a vast freighting business.

"The route suggested might commence either at Tampico, Santander, or Brazos Santiago, as the face of the country should prove most inviting, or the greatest facilities exist for forming a good harbor, and in case the country south of Chihuahua should, in the settlement with Mexico be released to that country, a route a little longer, but possessing most of the advantages of that proposed, might be opened from Corpus Christi or Aransas to Guayanas, one of the most eligible ports on the Pacific."

During the session of the last Congress, Mr. Breese, of Indiana, presented an elaborate Report upon the subject of attracting to our country the commerce of India and the Pacific, in particular connection with Mr. Whitney's road. He collected much valuable matter, and furnished many new views commercially, agriculturally, politically, etc. We are indebted to the Report for most of the facts which follow.

The route proposed by Mr. Whitney projects from the shores of Lake Michigan, strikes the Mississippi at a point above the mouth of the Wisconsin, six hundred and fifty miles from St. Louis, thence westward to Missouri above the mouth of the Great Platte, thence to the great South Pass 42° in the mountains, and through the valley of the Columbia by Lewis's branch, to the ocean. The road to the South Pass is represented by Fremont as without any difficult ascent, passing through an open prairie region. The height of the Pass is seven

thousand nine hundred and forty feet above the gulf of Mexico, ascent gradual and scarcely perceptible; distance from mouth of the Great Platte, eight hundred and eighty-two miles, and from St. Louis twelve or fifteen hundred miles, according to the route adopted, being steamboat distances. From the Pass to the mouth of the Oregon, the extent is fourteen hundred miles. According to Col. Fremont, it appears that the mouth of the Kansas is seven hundred feet above the gulf of Mexico. The road thence to Republican Fork, five hundred and sixteen miles, ascends twenty-three hundred feet more, or four and two-thirds of a foot to the mile; the next one hundred and twenty-eight miles ascends eight feet to the mile; the next one hundred and seven miles nine feet; the next eighty miles sixteen feet to the mile; the next eighteen miles forty-two feet to the mile; the next eighty-nine miles to the Pass, two and a half feet to the mile.

"From this point a descent takes place more irregular than the former ascent, to an elevatian of about six thousand feet above the sea, and maintains a uniform elevation to the Beer Springs, a distance of 545 miles, and 311 miles west of the Pass; then the surface appears to be equally irregular for 540 miles.

"The next 178 miles is on a general elevation of 3,000 feet from the sea, or a descent of seventeen feet to the mile.

"From the last point to the foot of the Blue Mountains, is 282 miles, (the west side.) The elevations and depressions of this last distance vary so as to make an average grade of 10½ feet to the mile; thence to Fort Vancouver the road descends 1,000 feeet in 303 miles, or less than 3½ feet to the mile."

But not to delay the reader with the minutiæ of these matters, we will furnish some of the data afforded by Mr. Breese, in evidence of the value of this overland communication, which are as applicable to all the different routes proposed to the Pacific as to the one under discussion. What shall our commerce gain in this direction, and how shall our railroad be employed? The Russian possessions border upon our western coast, whatever their trade may be worth. Manchoo Tartary adjoins, through which the great Saghalin river, four thousand miles long, flows, bringing it into communication with Pekin. The country is densely populous, and very little known.

The Island of Japan is next in order, its population is estimated at not less than fifty millions. Foreigners are excluded, except the annual visits of two Dutch vessels and ten Chinese junks. Products of this island,—silks, teas, rich manufactures, copper, sulphur, tin, gold, silver and lead.

The Chinese empire contains a population of three hundred and sixty-seven millions; the capitol, Pekin, containing from one million

five hundred thousand to three millions, according to estimates. The city of Tien-ts-in is the port of Pekin, and is distant sixty miles from the sea, thence the great city receives its supplies of grain and salt. The province of Kiang-nan contains seventy-two millions of inhabitants, and is exceedingly fertile. Nankin and Soo-choo are its chief cities, besides many thousand villages and towns. The people are advanced in letters and arts. Nankin is a great manufacturing town. The Hong-ho and the mighty Yang-tsee-keang rivers water this country. At the mouth of the latter river is the populous city of Chang-hae,* now open to foreign commerce, and likely to become celebrated. Southward on the coast is the Chi-kiang province, "the land of silks and green teas," a dense and advanced population. Its cities are Hang-choo, next in rank to Pekin, and Ning-po, now open to foreign trade. The Fuh-kien contains under its jurisdiction the Island of Formosa,—this is the district of the black teas. Its city among those open to foreign trade, is of much importance. Formosa yields abundant sugar, rice, camphor, etc. Canton is in the Quang-tong province, formerly the only Chinese port open to foreigners. Its population is one

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* Chang-hee or Shang-hai, is the New Orleans of the eastern world. Our government has lately appointed Mr. Lyon as Consul there. A New York paper thus enlarges the description:

"It is the northernmost, and therefore the healthiest of all the Chinese ports open to foreign trade. It is situated in 32 deg. of north latitude, at the mouth of the great river, Yang-tsee-kee, a name signifying Child of the Ocean. Shang-hai is the most populous of the Chinese ports with which foreigners are permitted to trade. Within the walls are five hundred thousand inhabitants; in the suburbs are two hundred thousand. The population of Canton is only about half that number. It is situated immediately on the ocean, while Nankin is reached by passing up a river. On the banks of the Yang-tsee-kee, and around Shang-hai, lies the region in which green tea is produced. Teas are cheaper at this port than at Canton; they are brought immediately down the river, and the producers have no canal transit duty to pay, as at that port. This circumstance and the commodiousness of its harbor, and the healthiness of its climate, are probably the reasons why the English trade with this place has increased so rapidly It is now quite equal to the English trade with Canton.

"Shang-hai commands the extensive Japanese commerce which passes through that city up the Yang-tsee-kee to Nankin, and thence through the great canal, six hundred miles further to Pekin, the great inland city of the empire. So large is the trade of the port, that seven thousand junks have been seen lying before it at once waiting for their cargoes. If the trade with Japan is ever acquired to this country, it must, in all probability, be by means of the wealthy Japanese merchants, amounting to about two hundred, who reside at Shang-hai, where they conduct the commerce of the country, maintain their own schools, and preserve a separate existence from the Chinese.

"The river Yang-tsee-kee is the Mississippi of China; its banks, in the language of the country, are called the paradise of China. The French missionaries remarked long ago, that great resemblance existed between the climate of the Chinese coast and that of North America. But at Shang-hai the winters appear to be colder and the summers warmer than is the same latitude in the United States. At Shang-hai the snow falls in winter to the depth of two or three inches; and ice, the product of the winter frost, is preserved for use through the summer."

million. The coast population of China is estimated at two hundred and seventy-four million.

"Thus" says Mr. Breese "it will be seen that this vast empire slopes to the ocean and to us with its whole territory intersected by canals and navigable streams, all uniting with or tributary to the mighty Yang-tse-keang and Hoang-ho, wafting their rich freights into the great canal, convenient to the great city of Chang-hae, distant from the Columbia or San Francisco, 5,400 miles, and ready for an exchange for our numerous products and commodities. The present sea voyage is over 18,000 miles, and requiring nearly six months in which to perform it."

We extract a few passages at length from the Report, descriptive of the Chinese:

"The population being from the Imperial census, and taken for taxation, is supposed by those best informed, to be under rather than over the actual number, and it is also believed that a considerable increase has taken place since that date, and that the entire population of China is not now less than four hundred and fifty to five hundred millions, of the most temperate, orderly, frugal, intelligent and industrious of any people on the globe, not one of whom, arrived at man's estate, but can read and write. They use no machinery, even for manufacturing, still with all the soil occupied, they do not produce from it enough to sustain life, and famine often ensues a short drought. Their foreign commerce, carried on by themselves, is small, and confined to Japan, Manilla, Java, Borneo, and Singapore. Their productions for export are teas, in which they have no competitor, raw silk and manufactured silks, which may be extended to an unlimited amount. With a little attention, they can compete successfully with any nation, except, perhaps, in articles of taste, purely in blending colors. Plain silk goods they can make cheaper than any other nation; but our tariff of 1842, imposing a specific per pound duty, entirely excluded their silks.

"They are very ingenious and expert, and manufacture almost any thing in good taste. Some of their goods are richer than those of similar fabric in any other country. They produce drugs, camphor, rhubarb, etc., etc., for all the world, and can produce any quantity of sugar, and probably cheaper than any other country, for labor is nowhere so cheap, or more bountifully applied; and they can produce numerous other articles both desirable and useful, which are now excluded from their exports by the expense unavoidably attendant upon a commerce so far off. Their imports consist of manufactured cotton and woolen goods, some iron and steel, and a variety of other goods from England; and from Bombay, Calcutta and Madras, three to four hundred thousand bales cotton annually, and from thirteen to twenty millions of dollars in opium, and some rice. From the Dutch islands, they import a large amount of rice, an account of which is not found in any statistics. Waterson's Cyclopædia, page 153, says: 'The quantity of rice imported into China, in 1834, in British vessels, was 15,406, and in American, 7,412 tons: total, 22,818 tons.' They also import products of the sea and islands, such as birds nests, biche-de-mer, fish maws, sharks fins, sandal wood, putchuck, ratans, pepper, and a great variety of articles. From us they take some raw cotton, and hereafter it is probable they will take a large amount. They now use it for wadding their clothing. It is better than the Indian cotton, and we can produce it cheaper; but in the manner in which we gin it the fibres are bent or broken, and as they have no machinery they cannot straighten or use it for spinning. A way will yet be found no doubt to accomplish this object, when it is not unreasonable to suppose they will take 300,000 to 500,000 bales annually; and more, if we take their products in exchange They take our cotton goods, drills, sheetings, to a large amount. No nation can compete with us in these goods, and they, the former particularly, may be considered as staple as rice. They take our lead and copper, our ginseng, furs, and our flour; and if we could send to them short of the long voyage twice across the equator, (almost sure to destroy all produce, animal or vegetable,) they would take our Indian corn in any quantity, our rice, our tobacco, our pork, beef, hams and lard. All foreigners now there depend on us for these articles, as well as butter and cheese; both of which your committee are informed, being sold frequently at one dollar per pound. It appears that in 1838 they commenced taking leather and hides from Russia: the amount more than doubled in four years. As they keep but few animals, they can-

not supply themselves with leather, and this is no doubt the cause why it has not been in general use, but should its use increase as it has commenced, the demand will soon become very great, and to us alone must they look for a supply.

"The committee have mentioned a few leading important articles; but should we succeed in opening a direct way whereby a free, frequent, and cheap exchange could take place, they fully believe the variety on each side would be endless, and the amount without limit, and we should have an advantage over the present sea voyage, or any other route or channel, which would be incalculable, and will all pass, both ways, in north latitude, from above 30° to 40°, so that teas and other products, our Indian corn, flour, beef, pork, hams, butter, cheese, etc., etc., will escape the great danger of injury and destruction from the long sea voyage around the cape, or any route twice across the equator.

"It is known that the Chinese are not a maritime people, and probably never will be so, from custom and want of materials for building ships; therefore the more important is the commerce to us, as we should be carriers both ways. We now have all this within our grasp, to be secured to us forever by this iron road, as the committee fully believe."

The Sandwich Islands are distant two thousand miles from our coast, they are twelve in number, (we draw upon a paper prepared by the editor of the Review when editor of the Southern Quarterly, upon "Oregon and the Oregon Question,") of which the chief are Hawaii, Maui, Oahu and Kauai. They were discovered by Captain Cook, whose valuable life was sacrificed to the fury of the natives. The savages of these islands soon proved themselves capable of high cultivation. Although their native treachery is not entirely subdued, they have yet made, in so short a period, extraordinary progress in civilization. Extensive missionary operations have, for some time, been conducted on the islands. The sovereign on the throne, with his ministers and servants, have professed a faith in the religion of Christ. Seldom has a monarch exerted himself more strenuously for the good of his people. The main mission enterprize has been conducted by the Presbyterians. The Catholics endeavored to get foothold, and the sturdy opposition with which they were met by the Protestants, is thought to have effected more good for their cause than evil. The French government compelled, at the mouth of the cannon, a toleration of the Catholic faith. The American missionaries have almost formed a new language for the natives,—a written language,—into which they have translated the whole Bible. They have instituted every where societies, churches, schools, and the foreign population which has congregated on the islands is every day on the increase. The whole population is about one hundred and fifty thousand, of which perhaps one thousand are foreigners. Two-thirds of the foreigners are Americans; the others are English, Chinese, French, Spanish and Portuguese. The possible population which the islands could support, may be set down as many times greater than the present, and there are reasons for predicting a very rapid augmentation of numbers, but the native popula-

tion is rapidly decreasing. An independent government has been established, and since all the islands were united under a single sovereignty, there have been several monarchs. Old Tamahamaha was, perhaps, the most celebrated of these. His son, Riho Riho, went to England to visit his brother, George IV., and was received with great eclat. He died in England in 1824.

The Sandwich Islands, since their first discovery, have been, to a great extent, under British influence. Latterly, Great Britain has been disposed to make the connexion a more intimate one, and has only been checked by the jealousies of other powers. The affair of Lord George Paulet, in 1843, caused not a little excitement; and taken in connection with the occupation of the Falkland Islands ten years before, by British forces, evidences the state of feeling with which the islands of the South Sea and Pacific Ocean are regarded by that nation. The proceedings of France, too, in relation to the Society and Marquesas Islands, have a significance not easily misunderstood. The claim which England has upon the Sandwich Islands, is founded upon the discovery of Capt. Cook, and the possession which Vancouver, in 1794, is said to have taken of Owyhee, by the free and voluntary cession of Tamahamaha I. and the other chiefs. The latter pretext has ever been considered by the rest of the world as flimsy indeed, invented only to conceal the ambitious schemes and grasping policy of the British nation. The Sandwich Islands are now, however, free and independent, so far as the acknowledgments of other nations can make them so. These acknowledgments have been lately made by England, France, Belgium, and the United States. Diplomatic agents, etc., are sent to and accredited from them. It is the obvious interest of all nations that they should remain free.

The soil of the islands is not, in general, fertile. There are exceptions, however, in particular parts, and the climate in all parts is regular and tropical. Cotton, indigo, coffee and wheat flourish, and will improve to a large extent. Potatoes abound, and the supplies furnished to trading ships touching at the islands, are of great value. Cabinet woods grow luxuriantly, and sugar in large quantities, it is thought, may be cultivated. A Belgian company is now engaged in experiments upon this crop, and a silk company are anticipating a profitable employment of capital.

In reference to the commercial importance of the Sandwich Islands it may be remarked, that annually above four millions of dollars in American property have touched there, and that the imports for the eighteen months ending August, 1841, since which time the increase

has been considerable, reached $674,000, of which the United States furnished $310,000; England, $94,000; the residue being furnished by Mexico, Prussia, California, Chili, China, Society Islands, Russian America, Manilla, New South Wales, etc. The imports from the United States consisted of cotton cloths, prints, chintz, hardware, glass, Britannia ware, copper, cordage, naval stores, furniture, canvass, flour, bread, provisions, wines, spirits, soap, iron, paints, shoes, clothing, books, lumber, etc. The exports from the port of Honolulu alone were, during the same period, $178,130, besides specie to China, and consisted of sandal wood, bullocks hides, goat skins, salt, leaf tobacco, sugar, molasses, oil, arrow root, raw silk, and provisions for vessels. We have seen no later accounts.

In 1841, there touched at Honolulu, the chief island, the following commerce:—American whalers, 50; English, 7; American merchantmen, 19; English, 13; French, 2; Oahuan (native,) 40; Mexican, 1; American war ships, 10, (including the exploring expedition;) English, 1.—Total number of vessels, 143. The native commerce is very considerable between the islands, and even beyond them. Not long since the sovereign purchased an old English ship, and made rather an unfortunate adventure to China, which somewhat checked the ardor of his enterprize in that quarter.

The Polynesian group of Islands are next, with a population of one and a half millions. Passing the equator southward, is reached the island of Papua, inhabitants five hundred thousand, trading with China. Southward still, is Australia, with a colonial population of one hundred and sixty thousand, and a native one of sixty-three thousand. The Dutch Island of Celebes yields abundant rice, and contains three millions of inhabitants. Java contains from five to six millions of souls, exporting annually thirty millions of dollars, principally to Holland, in coffee, sugar, indigo, etc. Sumatra, population two millions; annual export in pepper alone, thirty millions pounds. Borneo contains from three to four millions; rich in soil, and abundant in the minerals, gold, antimony, tin and diamonds. The Philippine Islands have a population of three million five hundred thousand, and belong to Spain; they produce sugar, coffee, indigo, hemp, etc. Singapore has already great commercial note, and it is thought will become the centre of trade in all British India. The population of India is one hundred and eighty-four millions, including Cobul and Affghanistan, lately conquered, and its commerce centres in Calcutta, Bombay, Madras, Ceylon, and Singapore, to the amount of about one hundred and fifty million of dollars annually. The country is now oppressed with debt and taxation under British misrule.

Annexed to the elaborate report of Mr. Breese are a number of interesting and valuable tables, from which, with no little labor to ourselves, we have condensed the following:

Statement of the number of vessels, amount of tonnage, and crews, which entered and cleared at the ports of the following countries, from and to ports beyond the Cape of Good Hope and the Pacific.

	Inward.			Outward.		
	Ships.	Tonnage.	Men.	Ships	Tonnage.	Men.
England, 1842,	877	329,404	16,698	823	348,724	18,468
United States, 1845,	329	111,180	6,998	367	125,582	8,305
France, 1833,	117	36,040	2,048	117	36,040	2,038
Antwerp, 1839,	7	2,860	125	1	272	12
Bremen, 1841,	6	1,800	100			
Hamburg, 1841,	10	5,000	200	10	5,000	200
The Netherlands, 1840,	188	97,231	5,150	221	113,862	5,625
Russia with China, estimated from the amount of commerce now overland, to require,	50	25,000	1,000	50	25,000	1,000
	1,584	608,515	32,319	1,589	654,480	35,648

Of the English ships inward, 108 were from Mauritius; from East India possessions, 430; from Java, 9; Philippines, 10; other islands 4; China, 73; New Zealand, 4; New Holland, etc., 79; South Seas, Chili, 86; Peru, 42; Whalers, 31. Of the vessels from the United States, there were for Dutch Indies, 11; British Indies, 24; Mauritius, 2; Bourbon, 1; Manilla and Philippine Islands, 7; China, 37; Mexico, 20; Chili, 23; Asia, generally, 4; East Indies, generally, 6; South Seas and Pacific, 228; Northwest America, 4. Of the French ships, 24 were from English India; 3 from Foreign; 4 from Dutch, and 3 from French Indies; from China, 2; Philippines, 3; Peru, 2; Chili, 6; Bourbon, 70.

Value of Trade Conducted by all the above Shipping.

	Imports.	Exports.
Great Britain,	$85,527,120	$59,187,185
France,	16,300,295	8,238,850
Antwerp, no statistics; but the seven ships entered must have averaged more than $100,000,	700,000	500,000
Hamburg, do. do., for five ships,	500,000	400,000
Bremen, do. do., for six ships,	600,000	400,000
The Netherlands,	23,527,390	4,702,130
United States,	11,438,403	5,443,828
United States from whale fishery, for 1845:		
157,700 bbls. sperm oil, at 88c., $4,371,444 00		
272,809 do. whale oil, at 33½c., 2,864,494 33		
3,195,054 lbs. do. bone, at 33½c., 1,065,018 00		
	8,225,717	
	146,818,925	78,871,993
Add for Russia, overland, with China,	12,048,055	7,581,295
	158,866,980	86,453,288

taxation under British misrule.

Of British imports, the value from China is twenty millions of dollars. Of British exports, over six millions pounds sterling are to the East India Company's possessions. The United States imported from Dutch Indies in 1845, $538,000; from British Indies, $1 276,000; from Manilla and Philippines, $653,000; from Chili, $1,133,000; from China, $7,285,000, etc., etc. The whole export at the same time to China being but $2,275,995.

The Chinese conduct an immense trade in merchandize and treasure with Bombay, Madras, and Bengal; also a greatly increasing one with Russia and the Russian possessions. Mr. Breese remarks:

"This commerce is thus particularly described, to show the ability of the Chinese to increase their commerce, when it can be done by an exchange of their commodities; and this is a striking illustration of that fact, being entirely a barter trade; and when we look at the time and immense expense required to carry on this trade, we can but wonder at its magnitude and rapid increase, showing conclusively that if a free, cheap, and frequent intercourse and communication were opened with them, there would be no limit to the amount of the exchange of commodities.

"In Postlethwait's edition of Savary, edition of 1775, he says: 'The Czar strove to accomplish this trade, and because the distance is prodigiously great, and the most part of the way desolate and dangerous, he erected stages at proper distances on the way, so that travellers might subsist at a reasonable expense, and likewise be secure against the attack of the Tartars. In some places he even built cities, where, if due notice was given of apprehended danger from the Tartars, the Russian authorities at these cities and stages are obliged to send troops to convoy the merchants and caravans from one stage to another, without being paid in the slightest degree for such protection. The caravans or companies of merchants sometimes consist of several hundred horses and camels, and bring a large quantity of goods.'"

The whole number of ships employed beyond the Cape of Good Hope, is about 2,000; estimated value, $40,000,000; those employed in the American whale fisheries, valued in 1846, at $20,000,000,—total, $60,000,000. Supposing a railroad constructed, and half the time saved, but half the vessels would be required, and $30,000,000 capital would be saved, besides a yearly saving in wages, interest, etc., of $12,000,000 more, etc.

The periods of travel under this new system, are thus estimated by Mr. Breese:

From England to New York,	10 days.
From New York to the Pacific, 3000 miles by railroad, at 30 miles an hour,	5 "
From Pacific coast to Chang-hae, the heart of Chinese commerce, 5400 miles,	16 "

Total, thirty-one days, or twenty-one days from New York, in place of the voyages now of four and five months.

From New York to Australia,	31 days.
" " " " Manilla,	24 "
" " " " Java,	25 "
" " " " Singapore,	27 "
" " " " Calcutta,	29 "

The passage now charged from England to Hong-kong, overland, is $900, and to Bombay, $614; extra luggage, $15 per 100 lbs. The

estimated number of passengers to and from Bombay, is four thousand; the English mail costing in addition from $1,000,000 to $2,000,000, total $4,000,000, much of which business it is deemed would be attracted to the road.

We extract a passage again from the Report:

"The English government have contracted to pay for the transmission of a monthly mail to Chagres, £250,000 per annum, and from Panama to Callao, £20,000 more—equal to nearly $1,350,000 for communicating with their navy and officers in the Pacific and on its coast. Were our road completed, this mail would be sent from England to some of our Atlantic cities, and thence by railroad to the Pacific, and down the coast in steamboats to any place of destination. Steam navigation can be carried on from Oregon or Upper Californaia to good advantage, coals of good quality being abundant in Oregon, particularly on Vancouver's Island; whereas, in southern latitudes there is none, and must be transported at heavy expense from England, for both sides of the continent. Perhaps there is no ocean and no country so admirably adapted for commerce by steam as Oregon and the Pacific, that ocean being the most tranquil of any, while Oregon is supplied abundantly with both timber and coal suitable for fuel and ship building; and on the Asiatic coast are islands numerous and large, along the route to China and to India, so that a voyage may be made from Oregon to Japan, to and along the coast of China and to India, almost without being out of sight of land. All the north of China is also well supplied with good coal down as low as Formosa, in latitude about 36 deg., but none below that.

"Neither has any estimate been made for passengers, for business, or commerce, of the population which will, if the road is built, settle on its borders, or for any increase of commerce with Japan, China, etc, when they will be brought almost at our doors."

The following is the estimated cost of the road:

For grading, bridging, etc., except the bridges across the Mississippi and Missouri rivers, for 2,630 miles, say 5,000 miles, . .	$13,151,000
For two bridges across the Mississippi and the Missouri, .	800,000
For superstructure for a single track, sidings at stations, depots and turn-outs, say for 2730 miles, at $10,500 per mile, . .	28,665,000
For engines, cars, wagons for freight, depots, etc., . .	10,276,600
Contingencies, etc., ...	2,000,000
	54,892,600
As the road will not produce sufficient from its earnings to keep it in repairs and operation to its completion, therefore add for that purpose, ...	15,000,000
Total estimated cost, when completed and in operation, . .	69,892,600

We leave the subject to the reader in all its aspects, bearings and results. The day will no doubt come when what the best of us think mere matters of romance and fancy, or at least find it difficult to think otherwise of, will become in this instance, plain, dull, plodding matter of fact. We hope so for our country, whose destiny must be great in any case. We have allowed full justice to the claims of all the projections which seek the Pacific across our continent, preferring and adopting, and advocating, THE GREAT SOUTHERN ROUTE THROUGH TEXAS, MEXICO AND CALIFORNIA.*

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*A ROUTE TO SAN DIEGO.—THE VALLEY OF THE PASO.

Since the above was written, a route has been proposed at Washington, which leaving the Mississippi river and passing through Texas, strikes the Rio Grande near

PASSAGE BETWEEN THE OCEANS BY SHIP CANAL.—BY THE EDITOR.

After discussing the question of railroads, we should not consider our labors yet complete without a reference to the proposed canal communications which have so long attracted public attention. No American can feel other than gratulation in such a prospect as is afforded here, and we in New Orleans are more deeply interested than our fellow countrymen any where else. Our city instead of being the great mart of southern commerce, in the event of such a communication, from its proximity, would of necessity become the great mart of American commerce, and perhaps the greatest commercial mart in the world. It would be easy to show this with something of the certainty of figures.

The Hon. G. M. Dallas, Vice President of the United States, it is known, has lately made an interesting and valuable contribution upon

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El Paso, and pursues this valley of the Gilae, to San Diego, a point on the Pacific southward both of St. Francisco and Monterey. It will be remembered that this line from El Paso, was suggested during the last session of Congress, by Mr. Calhoun, as a proper one within which to conduct our military operation against Mexico.

The Washington Union of the 13th May publishes an interesting letter from a resident of this country, descriptive of its soil and general character, which may very well be referred to by us on this occasion:

"The settlement of El Paso extends from the falls of the Rio Grande, on the north to the Presidio, on the south,—a distance of twenty-two miles,—and is one continuous orchard and vineyard, embracing in its ample area an industrious and peaceable population of at least eight thousand. This spacious valley is about midway between Santa Fe and Chihuahua, and is isolated from all other Mexican settlements by the mountains that rise on the east and west, and close into the river on the north and south. The breadth of the valley is about ten miles. The falls of the river are two miles north of the "Plaza Publica," or public square, and afford sufficient water power for grist and saw mills enough to supply the entire settlemement with flour and lumber. The most important production of the valley is the grape, from which are annually manufactured not less than two hundred thousand gallons of perhaps the richest and best wine in the world. This wine is worth two dollars per gallon, and constitutes the principal revenue of the city. The El Paso wines are superior in richness of flavor and pleasantness of taste to any thing of the kind I ever met with in the United States, and I doubt not that they are far superior to the best wines ever produced in the valley of the Rhine, or on the sunny hills of France. Also great quantities of the grape of this valley are dried in clusters and preserved for use during the winter; in this state I regard them far superior to the best raisins that are imported into the United States.

"Pears, peaches, apples, quinces, and figs, are produced in the greatest profusion The climate of this country is most salubrious and healthful. The inhabitants here suffer more from the depredations of the Apaches than from any other cause. They are frequently robbed of all they possess, in one night, by the incursions of these lawless plunderers. A few companies of dragoons would, however, soon drive them from their hiding places in the mountains, and put an end to their depredations. Add to the fruits and wines of this rich valley a vast quantity of corn, wheat, and other small grain, and the surplus productions of the place will, under its present state of agriculture, amount to near one million of dollars per annum. What, then, would be the amount of the surplus under the advantage of American agriculture?"

this subject, from which and other data, viz., the work of Mr. Greenhow, the surveys of the French and Mexican governments, now in our possession, we will draw for a few particulars.

It is proposed that one of the stipulations in the treaty of peace to be made with Mexico, shall be a right of way in favor of the United States through the appropriate parts of Mexican possessions, for this canal. Such a stipulation should be insisted upon, and will meet the unanimous approval of all nations.*

Four independent routes for a canal have been proposed. 1. By the Isthmus of Panama or Darien; 2. The Lake of Nicaragua; 3. The river Atrato from the Gulf of Darien; 4. The Isthmus of Tehuantepec. Others were suggested long ago by Humboldt less practicable.

1. The Panama.—This is the narrow neck of land which connects the two Americas, and is a province of New Granada, between the latitudes 8° and 10° N; general breadth, 40 miles; narrowest, 28; population of province, 72,000. The Andes afford many gaps or passages here. The rain storms are tremendous and protracted. Many gold mines were formerly worked in the Isthmus. In its surface there are few obstacles to a ship canal, but the country affords no good population or laborers, the heat intense, the wet season eight months long, and the health very doubtful. The commercial utility of such a communication, Mr. Greenhow in his history, thinks will be scarcely sufficient to warrant the enormous expense.†

* "In effecting the cession of the Isthmus, therefore, by subdued Mexico, we need apprehend the jealousy of no power worthy of notice. Sir P. Campbell Scarlet, in urging the British government to undertake the Panama route, makes the following shrewd and correct remarks, the tone of which falls in very appropriately with our American view: "Could any other nation blame England for acquiring by the terms of such a treaty, the possession of a narrow neck of land, for the sole purpose of rendering its extraordinary position beneficial to the world? Could France, who, under color of resenting a national insult to her consular representative, is pushing her conquest in Morocco, and will probably in the end be appeased with nothing short of the dominion of all that vast territory lying between the Pillars of Hercules and the confines of Egypt? North America is too wise to object to the completion of a design, no matter by what nation, which holds out to her a boundless prospect of future wealth.'"

† "The climate of the Isthmus of Panama is acknowledged to be dangerous, a fact confirmed by the accounts of Humboldt and other writers. The fear of its unhealthiness was one of the causes that prevented the assembling of Congress there, after the emancipation of the states of Spanish America had been convened, in order to establish a system of general policy suited to the interests of the American nations. The same fear prevented the egineers, Lloyd and Falmarc, remaining in the Isthmus a sufficient time to complete the labors of the exploration, which they undertook in 1827 and 1828, by order of General Bolivar, and in a succeeding expedition Lloyd lost his life. To this greivous cause is likewise to be ascribed the paucity sf population and the want of the necessary means of existence in that Isthmus, and as the climate does not permit the increase of the former there is no possibility of augmenting the latte r.

"The Isthmus of Panama is again being explored, but it has been lately estimated

2. The Lake of Nicaragua is situated between eleven and twelve degrees north latitude; its extent is large, and its surplus waters are carried to the Carribean sea by the river San Juan; navigable during the rains, according to McCulloch, throughout its whole extent. From four to twelve feet of water is always afforded in the Rio Juan, and it is proposed to improve its navigation, or to construct a canal, from the Lake Nicaragua, which is adapted to ships of largest burthen to the Pacific fifteen and three-fourths miles, through a country not elevated in general more than nineteen feet. The lake's level at surface is 134 feet above the Pacific, and the difference of levels between the two oceans is twenty or twenty-two feet. The immense obstacle in the way of this route Mr. Greenhow states, is that one mile of tunnel and two of very deep cutting through volcanic rock, in addition to many ocks, will be required between the lake and the Pacific.*

The most important of all these projections, and the one of the greatest interest to Americans from its vicinity and practicability, is the one which crosses the Isthmus of Tehuantepec: this we will now examine.

The Rio Guacsecualco or Coatzacoalcos has its mouth in the Gulf of Mexico in the Mexican province of Vera Cruz, seven hundred miles from the mouth of the Mississippi river. The route across the isthmus follows the course of the river as far as Tarifa, at which town a canal or railroad will begin, passing to the western lakes, which are discharged into the Pacific. The width of the isthmus in this part is one hundred and thirty-five miles, and its central mountainous chain exhibits a depression in the line of the route. For twenty-five miles a plain is formed whose streams flow north and whose southern bounds are a chain of hills separating the rivers flowing north and south. There are passes or gates here such as that of Chivola and Tarifa. The northward streams enter the Guascualco, the southern in the

that even should the work be at all practicable, its accomplishment would require the united efforts of the principal nations of the world, and an expenditure of at least 200,000,000 of francs."

* "From the report published by command of the government of the state of Nicaragua in reference to the exploration of that Isthmus, effected during the years 1837 and 1838 by Mr. J. Bailey, it seems that the course of the river St. John with all its windings is about one hundred and fifty kilometres in length, six and a half of which are obstructed by four rapids, caused by banks of rock stretching across the whole width of the river. These obstacles and the long course of the river were considered such formidable impediments as to suggest the construction of a canal as an easier operation that that of rendering the river itself navigable.

"It has been calculated that this undertaking would cost one hundred and fifty millions of francs; but even this sum is probably much smaller than that which would be required

Chicapa, which is discharged in the lake east of Tehuantepec on the Pacific.

We have before us a volume of two hundred pages published in 1844 in London, with a large number of maps containing the history of routes and the results of all the surveys and examinations yet given. It is prepared by Gaelana Moro, appointed chief engineer in 1842 by Don Jose de Garay, who had obtained from the Mexican government the exclusive privilege of erecting the work, the means of transport, right of toll for fifty years, and the waste lands on either side of the line thirty miles wide. The passage to be open to all nations and considered *neutral territory*.

The history of this passage of Tehuantepec is curious enough. Cortes was in anxious search of a strait between the points of the two oceans, and he wrote to Charles V.: "I have received information as well of the riches of the country as that in the opinion of many navigators there exists a strait leading to the opposite sea." He afterwards writes:—

"Should we, with the Divine assistance, so hit upon this strait that the navigation from the Spice countries (the East Indies) to the kingdoms of your Majesty would become excellent and shorter, so much so that it would be two-thirds less than the present navigation, and without any danger or risk to the ships in going and coming, because they would always make the passage through kingdoms and possessions of your majesty; and in case of any emergency they could repair damages, withou danger, in whatsoever port they might make for that purpose, as being in your Highness's own states."

In 1824 the state of Vera Cruz and the federal government of Mexico appointed a commission of survey, and Ortiz and Orbegoza engineers. The results of this movement are scarcely worthy of note. Ortez thus describes the Guacsecualco river:—

"The bar of the Coatzacoalcos is permanent and constant, forming two canals or channels; that to the left or the west, has on it in the rainy season (that is, from the beginning of June to the end of February) three and a half fathoms of water, or twenty-one feet, these being increased to twenty-three at high tides. That on the right or to the east, has two and a half fathoms, or fifteen feet, and both during the dry season lesson three or four feet, the principal channel maintaining itself at not less than eighteen feet, except perhaps under extraordinary circumstances. When a vessel would effect an entrance, with a view only to greater security, the fifteen feet channel should be preferred, because it has less current in it, and is probably wider, and because, when the sea-breeze blows hard, the currents are rapid in the great channel setting from east to west, and without taking a pilot it would be difficult if not dangerous to be entered by vessels of great draft of water."

Signor Moro declared in his report in 1844, referred to in a previous page:—

"It will be seen that as far as the island of Tacamichapa, a distance of 55 kilometres, (13 Mexican leagues nearly,) or at least up to the confluence of the Coachapa the Coatzacoalcos is navigable in all seasons and for every class of ships, forming convenient as well as most secure harbour. Schooners might ascend as far as Horaqueta by the branch of Mistan, and to Hidalgo-titlan and somewhat higher by that of Apotzongo.

"From the battery on the left shore at the entrance of the river, a clear chanu

is to be seen through the break in the bar which we are informed never varies in position; and although we knew well that there is a sufficient depth of water for large ships (since but a few years ago two large French vessels with colonists had entered the channel), we examined it ourselves in an open boat, going out to the distance of 3000 metres, where we found 15 metres water with a rapidly increasing depth. The shallowest water we found on the bar was 6.2 metres, and we were not certain that we had gone over the deepest part of it. A North American pilot who resides in the establishment of Mr. Baldwin, assured us that he had many times crossed the bar, and that he had never found less water upon it than 21 English feet, equivalent to 6.4 metres. This account nearly agrees with our own observation, and confirms the old opinion that the bar does not shift, a circumstance easily explained since the current of the river is slow, and the tides are almost imperceptible at its mouth.

"In the vast and dense forests which cover the shores of the river and its tributaries, the finest ship-building timber as well as dye woods are to be found in profusion; those principally seen in the greatest abundance are the tall pine trees of the Sierra de Chimalapa; the noble cedars which line the length of the river especially above the stream of the Perlas; superb mahogony, and other hard and close-grained trees, such as Javicues, Huayacanes, Macayos, and Paques, from the latter of which curve and fashion timbers were cut in the time of the Spanish government for vessels of the largest dimensions."

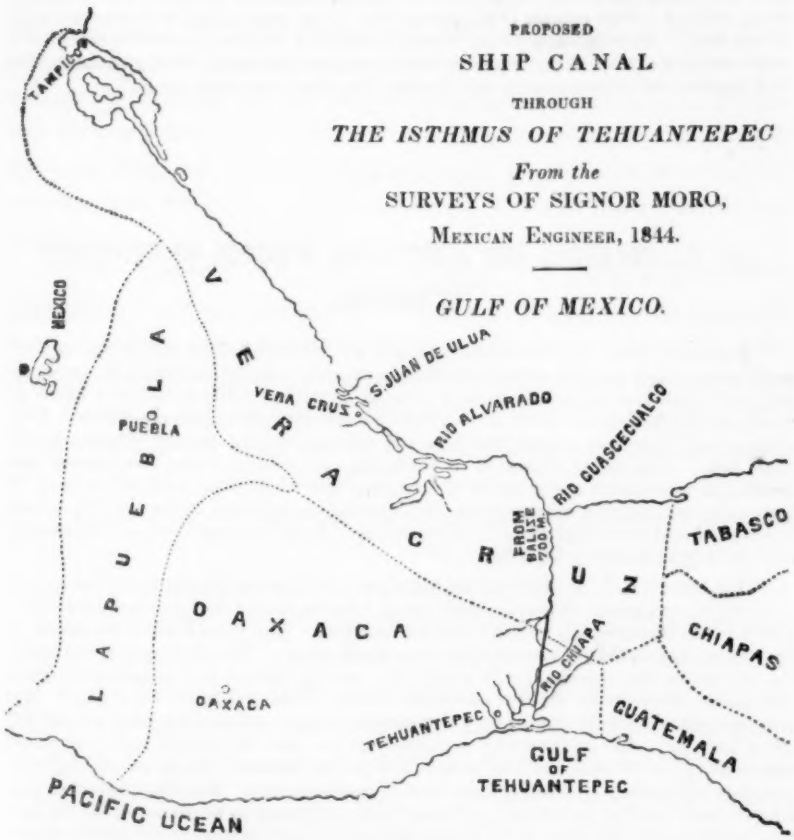
The Spanish engineer then expresses the conviction that the whole extent of the Coatzacoalcos in the direction desired might be made navigable by artificial means. Among these are engines for deepening, narrowing the river at certain points effected by means of dykes constructed with solid piles, straightening the course and checking velocity by locks. The difficulties of all of this were not supposed either arduous or expensive. Once overcome, the point is to construct the canal or to convey a sufficient quantity of water to an elevated point whence it may be distributed and directed to the Coatzacoalcos on the one side, and on the other to the upper lagoon and the Pacific. There are five independent projects to effect this, all of which are regarded practicable, but requiring more particulars in a description than we have space to give.

On the Pacific coast of Tehuantepec, the Bocabara constitutes the pathway between the ocean and the "lakes or lagoons which flow the rivers Chicapa and Ostuta. This passage is in depth twenty-four feet but obstructed at its entrance by a bar of nine feet depth only. This obstruction it is proposed to remove.

The estimated expense of this enormous work as made by the Mexican commissioners, is as follows, and is based upon the cost of the Caledonian canal in Britain:—

Cost of 150 locks at 200,000 francs	30,000,000
" 80 kilometres of canal at 475,000 francs	38,000,000
" 25 kilometres of trench at 10 francs per cubic metre	10,000,000
" 5 kilometres of trench at 15 francs	3,000,000
Regulation of the Coatzacoalcos, lakes and Boca barra	4,000,000
Total cost	francs 85,000,000

For the subjoined map we are indebted to the surveys of Signor Moro and his larger maps, which, in connection with a description of the country embraced, will have general interest with our citizens.



The isthmus of Tehuantepec is included in the Mexican provinces of Oajaca and Vera Cruz.

Oajaca contains 31,000 inhabitants, very few being Europeans, the rest are principally natives, some of whom are represented as superior in civilization to those of any other part of the republic, being intelligent, industrious, docile, and joyous. There is a "mild and healthy climate precisely in those localities where the assistance of European workmen would be required." The natural productions of Oajaca are among the minerals, iron abundant, and of the vegetables, cotton, sugar and indigo will grow; the cedar, the mahogony, amber, and ebony are abundant; the pines attain to immense diameter and height. Indigo, maize, and sugar are now in cultivation.

The province of Vera Cruz contains 21,000 inhabitants, three-fourths being Indians engaged in agriculture. Its health in general is recommended by the circumstance that in 1830—

"Three expeditions of Europeans were sent to the Coatzacoalcos for the purpose of colonization. By a most unaccountable want of foresight the unfortunate colo-

nists were abandoned from the moment of their arrival, and were left without provisions, without shelter against the inclemencies of the season, and without assistance of any kind. Although everything seemed calculated to favor the developement and progress of an epidemic, no disease of this kind appeared among them, for those who died perished more from misery and famine than from any other cause."

Art. V.—COMMERCE AND AGRICULTURE SUBJECTS OF UNIVERSITY INSTRUCTION.

"*Resolved*, That this Convention cannot but view with deep regret, the neglect of all commercial pursuits which has hitherto prevailed among the youth of our country, and which has necessarily thrown its most important interests into the hands of those who by feeling and habit are led into commercial connections elsewhere. This Convention, therefore, cannot too earnestly recommend the speedy adoption by all their fellow citizens of measures *to introduce* COMMERCIAL EDUCATION *among our youth;* to train them up to habits of business, and thereby *to establish a body of merchants whose every interest and feeling shall be centered in the country which has reared and sustained them.*"—*Convention of Southern and Western Merchants held in Augusta, Georgia*, 1838.

"This, however, demands, what we have not in all parts of the State, *an* EDUCATED CLASS OF HUSBANDMEN. When I say educated, I do not mean "*book learned farmers;*" I mean *men thouroughly trained to their business.* The great fault of education in South Carolina is, *that it has no particular application.* The clegyman, the lawyer, the physician, the merchant, the mechanic, and the farmer are all educated alike. The mere statement of the fact shows the defect. How is it to be remedied? We have not schools arranged for every department of life, and perhaps such are not always desirable. But with suitable attention on the part of parents and guardians, education might be so directed as to fit a man for his business, instead of making him a prodigy of learning, *without one particle of common sense.* The future planter and farmer needs but the careful and judicious training of home to be prepared for his station."—*Speech of the Hon. J. B. Oneall before the Agriculturists of South Carolina.*

It is not a little extraordinary that while no effort is spared in conducting the education of our rising citizens through all the delightful fields of classic literature, the abstruse departments of mathematics, the profound learning of the rhetoricians and the scholars, in the most favored sections of the country, scarcely anything is ventured for the benefit of the great mass who are reared and intended neither for the professions nor the politer walks of literature, but the plodding, busy, active life which opens upon them as they step from college wails and enter the world beyond.

A century or two ago, this were easily explained. Learning had found for itself a niche far upward from the vulgar gaze, and frowned down upon the "chapmen," the "pedlars of wares," (*i. e.*, merchants,) and the rude tillers of the soil, "serfs" and "stalwart yeomen."

But labor has not remained under this ban, and enterprise has over-

thrown this dynasty of monopolizing ranks and orders. The practical pursuits have vindicated themselves, and occupy ground as high as those which trace the stars and compute the precession of the equinoxes. Merchants are no longer "chopmen," cultivators of the soil lose the condescending "yeomen;" "sooty artisans" occupy the chair of the Lord Mayor of London. The statue of the man is measured by the original, and no longer by the accidents of birthplace, position, and pursuits.

The true purposes of education are to fit and qualify men for those occupations in life upon which they are urged by inclinaton or necessity. It is true that there is a certain discipline of mind and an enlarged capacity to act induced by almost any character of study. This renders education desirable even when *practically* misdirected. But when it is considered that life is short and its duties and obligations numerous, few will object that mental discipline, enlarged capacities, and real, substantial and practical attainments, suited precisely to the relations in which the individual finds himself towards society, should be secured hand in hand together, if such a thing be possible.

A direction like this given to education, does not, as many suppose, militate against the high and distinguished pursuits of science and letters in which the most celebrated universities in the world are engaged. This is right and proper, and any objection would argue a sad appreciation of the ultimate aims of learning. Sage professors of the law, grave and learned divines, doctors of medicine, natural philosophers, mathematicians, erudites in general and without definite object, all congregate here, honoring and ornamenting human nature, and influencing silently, slowly, yet surely the progress of the world.

There should be such universities and institutes of learning, nay, more, there should be none established anywhere in which these high callings of mind are altogether or even in any considerable degree neglected. It is our part and object to insist only that they do not monopolise all attention, and exclude as unworthy of note or consideration the studies and knowledge which belong to departments of life equally important, more numerous, and in every respect as capable of being illustrated and improved by professorships and instruction.

It would be common place enough to speak of the importance to an agriculturist to be able to bring to his aid the principles which science is every day elaborating or developing from the crucible or the retort in relation to the earth, its soils, capacities, and growths, and all the laws which regulate them. It would be equally common-place to remark similarly upon the artist, or upon the merchant whose mission

indeed, brings him into contact with all the world, and whose enterprizes depend frequently for success upon circumstances and events which are taking place in every quarter of the world, seeming full often to ordinary observers of trifling moment. These points will be seen particularly hereafter, and they are but hinted at here to show that though taken for granted amongst men, the extraordinary fact noted in the opening of this article has still been permitted to exist.

Within a very few years some interest would indeed appear to have been excited in relation to *agricultural* instruction exonerating this pursuit from the censure of entire indifference and neglect. We shall but casually refer to this before proceding to the department of our subject which occupied a first place in inducing the present essay—Commercial Education.

"Agricultural schools," says Dr. John Bachman of South Carolina, "first had their origin, I think, in Germany; they were next introduced into France and Switzerland, and are now springing up in every part of Europe. The Rensalaer school near Albany in New York, is also an agricultural one. The most complete institution of the kind I had an opportunity of examining, is called the Institute of Agriculture and Forestry, at Hohenheim, near Stautgard. I observe that it is characterised in the British Farmers' Magazine, as the most complete agricultural school in Europe. Here, in addition to all the studies usually pursued in academies, all the operations of agriculture and horticulture are performed by the students in the open air, under the supervision of teachers qualified to undertake, note down, and record every observable fact and traceable cause. Here are delivered regular courses of Lectures in geology, mineralogy, and chemistry; on soils, water, moistures, vapor, fermentation, gases, their extraction, mutual attraction, condensation, and results. Instructions are given and elucidated by experiments on light, heat, electricity, galvanism, magnetism, &c. These are all employed by nature, and are in incessant operation. They constitute the class of great natural agents. Botany in the most comprehensive sense of the term, forms a very important feature, which extends to the physiology of plants, their uses, medical, and other virtues. Entomology is also taught as a science connected with agriculture, and the habits of insects, as well as birds and quadrupeds, are studied in order to guard against their depredations or to benefit by their labors."

Professorships have been endowed from time to time in colleges and universities applied to agriculture; one as early as 1790, at Edinburgh, another at Oxford in 1840, whilst upon the continent may be mentioned those of Liebig at Gessen, Rosa at Berlin, and Mulder at Utrecht. In the United States we have had lately one or two similar endowments.

Statistical and commercial information or such as is necessary in the conduct of the mercantile operations of a country, have been least fortunate of all in attracting the regards of scholastic institutions. As separate and distinct branches of university instruction, t hey have until very lately scarce had a place, and even now to but a limited extent. We have educated every class of the community, most of them specially, except our merchants, and these we leave to glean what they can upon the mart or in the *bourse*, without any of that light and instruction which

previously imparted would cause them to adorn their places and advance their country. Can it be wondered, then, that the mercantile classes yield to the nation so few influential and leading citizens, men of the stamp of Roscoe, Cœur, or Ricardo! Can it be wondered that trade is so often stigmatized a "a gainful craft," instead of winning as it deserves the appellation of a liberal and civilizing pursuit.

Does any one under-estimate the importance of the mercantile calling, and the surpassing influences of commerce over all the most interesting concerns of the world? It was commerce that engendered the spirit of liberty, after creating the western world; by breaking up the monstrous systems of colonial vassalage, and teaching men that in some positions at least, they are capable of self-government and the highest indulgence of freedom unrestricted. Who shall prescribe a limit to the education that is fitting for the man who would guide the extensive operations of foreign trade? Ignorance and low thrift do often most signally succeed in it, and intelligence is sometimes at fault and baffled in its own movements, but shall it be argued hence that the former is at all to be advised in the mercantile adventurer! Will one affirm this?

We shall directly see the course of investigation and research which should be pursued by the liberal merchant. If in the career of active, busy life, he is restrained from this, how much stronger the argument for previous preparation? The graphic pen of Addison will show far better than we could hope, what it is that commerce must do among men, and what it is forever doing:

"Nature seems to have taken a particular care to disseminate her blessings among the different regions of the world, with an eye to the mutual intercourse and traffic among mankind, that the natives of the several parts of the globe might have a kind of dependence upon one another, and be united together by their common interest. Almost every degree produces something peculiar to it. The food often grows in one country, and the sauce in another. The fruits of Portugal are corrected by the products of Barbadoes, and the infusion of a China plant is sweetened by the pith of an Indian cane. The Philippic islands give a flavor to our European bowls. The single dress of a woman is often the products of an hundred climates. The muff and the fan come together from the different ends of the earth. The scarf is sent from the torrid zone, and the tippet from beneath the Pole. The brocade petticoat rises out of the mines of Peru, and the diamond necklace out of the bowels of Hindostan.

"If we consider our own country in its natural prospect, without any of the benefits and advantages of commerce, what an uncomfortable spot of earth falls to our share! Natural historians tell us that no fruit grows originally among us, besides hips and haws, acorns and

pig-nuts, with other delicacies of the like nature, that our climate of itself and without the assistance of art, can make no further advances towards a plum than to a *sloe*, and carries an apple to no greater perfection than a crab. That our melons, our peaches, our figs, our apricots and cherries are strangers among us, imported in different ages and neutralized in our English gardens, and that they would all degenerate and fall away into the trash of our own country if they were wholly neglected by the planter and left to the mercy of our sun and soil. Nor has traffic more enriched our vegetable world than it has improved the whole face of nature among us. Our ships are laden with the harvest of every climate; our tables are stored with spices, oils, and wines; our rooms are filled with pyramids of china and adorned with the workmanship of Japan; our morning draught comes to us from the remotest corners of the earth; we repair our bodies by the drugs of America, and repose ourselves under Indian canopies. My friend, Sir Andrew, calls the vineyards of France our gardens; the spice islands our hotbeds; the Persians our silk weavers; and the Chinese our potters. Nature, indeed, furnishes us with the bare necessities of life, but traffic gives us a great variety of what is useful and at the same time supplies us with every thing that is convenient and ornamental. Nor is it the least part of this our happiness, that whilst we enjoy the remotest products of the north and south, we are free from those extremities of weather which give them birth; that our eyes are refreshed with the green fields of Britain, at the same time that our palates are feasted with fruits that rise between the tropics.

"For these reasons there are not more useful members in a commonwealth than merchants. They knit mankind together in a mutual intercourse of good offices, distribute the gifts of nature, find work for the poor, add wealth to the rich, and magnificence to the great. Our English merchant converts the tin of his own country into gold, and exchanges his wool for rubies. The Mahometans are clothed in our British manufacture, and the inhabitants of the frozen zone warmed with the fleeces of our sheep.

"When I have been upon the 'Change, I have often fancied one of our old kings standing in person where he is represented in effigy, and looking down upon the wealthy concourse of people with which that place is every day filled. In this case, how would he be surprised to hear all the languages of Europe spoken in this little spot of his former dominions, and to see so many private men who in his time would have been the vassal of some powerful baron, negotiating like princes for greater sums of money than were formerly to be met with in the royal treasury! Trade, without enlarging the British territories, has given us a kind of additional empire; it has multiplied the number of the rich, made our landed estates infinitely more valuable than they were formerly, and added to them an accession of other estates as valuable as the lands themselves."

The University of London, established a few years since, being deeply impressed with the truths we have developed, endowed a department of statistical and commercial knowledge, to be filled by able professors, and for the benefit of the rising merchants of that metropolis.

The city of New York, another great commercial mart, attached to its University a professorship of statistics, etc., filled for some time by the learned Dr. Lieber, now of the South Carolina College. With these exceptions we know of no institution which has given any very special attention to the matter.

It will be hardly necessary for us to dwell much at length upon the importance of statistical knowledge, as a study, although indeed, we do sometimes hear it idly depreciated. Abstract arithmetic is as true as the laws of nature, and in its application to matters of fact, to the operations of men, it is as certain and reliable, if not more so, than any this kind of knowledge.

Statistics have only attained any importance as a science within the last century. It was named by Archenball, of Prussia, about 1750. His work was followed by Schlossa's "Theory of Statistics," and Newman's "Outlines of Statistics;" many others followed. At the present time there are Bureau's of Statistics in Prussia, Austria, Bavaria, Wurtemburg, Naples and Sardinia. A similar office was established in Britain, in 1832, and more lately in the United States. There are Statistical Societies in England, France and in Saxony.

The present Secretary of the Treasury, in arranging the details of the Tariff of 1846, notwithstanding all the aids and facilities of a residence at Washington and access to documents of every character, found it necessary to propound interrogatories to every practical interest from all portions of the Union. Who were the men to answer these inquiries; to whom did the government look, and from whom did the most satisfactory responses come? To show the extent of these inquiries, and the information necessary to satify them, we will introduce a few: Capital invested in manufactures in your State? Amount in materials? Profit on capital? Annual quantity of manufactures? Raw materials used? Persons employed, men, women or children? Hours of work? Period of year? Rates of wages? What manufactures exported to foreign countries? Rates of protective duty necessary, if any? What amount agricultural products consumed by operatives? etc., etc. These are but random selections from fifty or sixty propounded, and which, if properly and fully answered by all sections, would have furnished a body of information incalculably useful to the citizen, the merchant, and the legislator.

Indeed, remarked with great truthfulness, the Hon. Edmund Burke: "As the Patent Office is now regarded as the general head and representative of the useful arts and the industrial interests of the country, it might be employed in collecting the statistics of all the great branches

of national industry—agricultural, manufaturing, commercial and mining. Without knowledge of this character a nation knows but little of its capacity, its resources, or its power; nor without it can the legislator perform his duties in relation to the interests of his country, with that sound wisdom and judgment which the importance of his position and the consequences of his official action, good or evil, demand. In almost every other enlightened nation great attention is paid to the procuring of the most copious statistics in relation to all its interests. In this country, it must be confessed, they are comparatively meagre. With suitable action on the part of Congress, aided by the co-operation of the several States, this desideratum might be supplied, and the mighty resources of our country become known as they are developed. In the absence of the action of Congress and the State legislatures upon the subject, it is desirable that voluntary associations of citizens should be formed in the several States and districts of the Union, with a view to the collection of statistical knowledge of all kinds."

Mr. Chambers, of the Edinburgh Journal of Education, has beautifully shown the aim, object, and achievements of the department of statistics, which si worthy of a detailed reference:

"Statistics is a science of comparatively late date, but it is one which promises to be of considerable service to mankind. Whatever can be ascertained by taking down numbers and instances and making summaries of them, may be said to be a proper object for this science. It is generally applied to such matters as the amount of population, the rate of mortality, the progress of commerce and manufactures, and the increase or diminution and crime. The benefit of coming to correct reckonings about these matters must be obvious, but we shall cite one instance to make it quite clear. From accounts which have been kept of burials in England for the last fifty years, it appears that the rate of mortality, or number who die yearly, in comparison with the whole population, diminished regularly down to 1831, but has since then been a little on the rise, showing the condition of the people at large (mortality depending on condition) was improving until that time, but has since been slightly declining. When such a fact as this is ascertained, statesmen are put on the alert to discover, and if possible remove the causes. Thus it is seen a nation may be much benefited by taking a census, and keeping of a correct register of deaths. The value of statistical operations, then, is manifest. Statistics may be said to be the account book of a nation for ascertaining the state of its affairs. One which keeps no statistical records may be said to be like a merchant who does business without keeping a ledger or ever coming to a balance. Statistics bear in like manner upon many of the interests of private life. Of this we trust to be able to give some notable instances in the sequel.

"It is one of its least utilities that it tends to substitute real and distinct knowledge in many matters for vague and general impressions. There is one other service which statistics has rendered of a more

remarkable, though perhaps less directly useful kind than the above. Almost all the occurrences which depend on the human will, happen irregularly as to time, as far as an individual is concerned. A man commits some particular crime, which he is not likely ever again to commit in his life; for instance, an assault, with violence. It was to all human apprehension the merest chance which brought him into the circumstances which provoked or prompted him to commit the offence. Yet, strange to say there is no offence so accidental as to individuals, or so unlikely to occur above once in an ordinary man's lifetime, but what statistics finds it to occur with the greatest regularity, in a certain range of individuals, and a certain range of time. The returns of a particular crime in such a country as England or France, are nearly the same for each successive year. In all classes of occurrences which appear occasional as to individuals, the same uniformity is observed when we go to sufficiently large numbers, even in the number of letters put into the post-office without addresses; there is a precise uniformity, if we take the office of a large city, and reckon year against year. Thus to find order in the most casual of things, even in the wayward and fleeting movements of the mind, affords highly interesting food for reflection."

A State University being now in course of organization in Louisiana, it seemed but fitting that we should bespeak on the part of the great commercial interests of New Orleans and our country, a share in its results more special than has hitherto been contemplated. The University is to be located in the city of New Orleans, a site destined, in the apprehension of the calmest reasoner, to be one of the greatest, if not the greatest, commercially, in the world. It is peculiarly fitting that such a city, which lives and has its being by commerce, whose merchants are almost without number, prospering and accumulating wealth beyond precedent; it is peculiarly fitting that such a city, we say, should lead the way in establishing what our whole Union requires, *a department of Collegiate and University Education, addressed entirely to the commercial classes.* Could any department be conceived more important, or confer more inestimable advantages?

Should the State be entirely looked to in this matter, or should not the liberal and enterprising merchants, for there are such here, take the matter in hand themselves, and by proportionate subscriptions raise a fund necessary to secure so desirable an end. Even single individuals in other communities have assigned a portion of their wealth to the purposes of education in the endowment of professorships in some branch of knowledge, and shall the merchants be found less liberal than these? A portion of their gains could never be more honorably expended than in this high and benevolent public duty. We have conversed with leading merchants here, who agree heartily with us in these views, and we call upon them now to *act* in consonance with their convictions.

In the bill chartering the University, there is a clause which we will insert, and which clearly extends an invitation to our public spirited and wealthy citizens to co-operate in carrying out effectually its organization. Who will lead the way from his abundance in aiding the first institution of learning which Louisiana and New Orleans have ever had worthy of themselves?

"Sec. 12. * * * That said administrators may attach to the University such other institutions, literary or scientific societies, schools and professorships, as to them may seem advisable, all of which, so far as relates to instruction, shall be under the control of the Board of Administrators."

How many liberal citizens of large fortunes acquired in the conduct of commerce, have we who now in the evening of their days, are disposed to enjoy the tranquilities of life, and that peaceful repose which belongs to the consciousness of a life not unduly spent. Have not these men a deep interest in the prosperity of a city with which they have grown, and which they have seen expand through every crisis? Is not an attachment natural, and a disposition to be felt benignantly in it, even after their day and generation have passed, and others, their descendants, are shoved upon the boards? We mark this in the liberal testamentary bequests which are occasionally made for public charities. But with a disposition to be useful and to serve posterity, is it well to await the close of life, and appropriate fortune only when it can no longer be enjoyed? The dead man enjoys not the charities he has endowed. It may be a sense of duty and a pure motive, to endow them, but how much better if done in life, under one's own, the best of all administrations, and with the satisfaction accruing each day of having done well and of deserving well of our fellow-men and of our Maker. Many of the good intentions of men, if left altogether to the execution of others after death, are defeated to a great extent, as we have had some notable examples in our country, the most prominent of which may be mentioned, the case of Stephen Girard.

However this commercial branch of the University be endowed, whether by a single individual or by the mercantile classes, let us inquire a little into all the purposes which it should be made to subserve, and the mode of its organization.*

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* The University of Louisiana.

The medical school of this has been long in operation; the law department has been organized. Much has been said about the literary department, but nothing as yet accomplished.

In addition to the professorship advocated by us, it becomes the State immediately to establish the following others, which are conceived sufficient for the present,

And first, such a professorship would tend greatly to elevate the standard of commercial character. It would induce liberality, equity, and enterprise; for by expanding and enlarging the views of individuals, it would enable them to move on a system commensurate with the wants of the country. All petty rivalry and jealousies, the growth of narrowed and contracted views, would at once be excluded, and the sordid and gainful spirit which has often been the reproach of trade, shrink away in the higher and nobler aims taught to the aspirant for commercial eminence and success.

Second, it would attract the attention and the interest of thousands of youth who come among us every year, or who reside among us, and are engaged in the busy pursuits of the metropolis, industrious, enterprising, ambition of success, yet surrounded by difficulties and discouragement and temptations, to lapse into the dissipations and excesses of a luxurious city, and win them insensibly to the prosecution of those studies so important and so necessary to distinction. To them the doors of the University would no longer be closed. For them, too, it becomes an *alma mater*.

Third, such a professorship would, by the library necessary for it and the collections it could at all times be engaged in making of everything bearing in any way upon the subject in its charge or distantly connected, furnish at all times to our city, ever ready to be consulted and used by merchants, statesmen, or men of study, a *bureau of statistics*

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and until prosperity shall indicate changes and improvements. Professors may then be multiplied, but not before:

I. Professor of Letters.
II. Professor of Moral and Intellectual Philosophy.
III. Professor of Mathematics and Physical Sciences.
I. Tutor in Ancient Languages.
II. Tutor in Modern Languages.

I. The *Professorship of Letters* to include the rules and structure, or grammar of language; the history of language and letters; rhetoric; criticism; belles lettres; poetry; composition; elocution, etc.

II. *Professor of Moral and Intellectual Philosophy*, including the duties and obligations of men towards each other; natural and moral law; evidences of Christianity; law of mind; sensition and perception; reason; phenomena of mind, healthy or diseased, etc., etc.

III. *Professor of Mathematics and the Physical Sciences*, embracing the theory and science of numbers; algebra; principles of geometry; trigonometry; mensuration; surveying; navigation; natural philosophy, embracing leading principles of chemistry, botany, mineralogy, natural history, mechanics, and astronomy, etc., etc.

A list of text books for these courses we had prepared, but have not now space to give.

Extraordinary Professors might be appointed, as in the German universities, from men eminent in different professions and pursuits, resident here or elsewhere, to deliver at their convenience or inclination, public and free lectures upon particular subjects selected by themselves or by the University. This would reward merit every where, and attach its sympathies to the institution.

more complete than any now existing in the Union, and in time equal to anything of the kind in Europe. The importance of this to a great commercial city whose destinies are everywhere written in glowing terms, submitting to comparison with scarcely another in the world, cannot be over estimated. Enlightened merchants appreciate now the value of such information, and know the difficulties of obtaining it here at any time. We must go the North to collect much of the data necessary every day in our operations, and frequently to Europe, for no public library in New Orleans now supplies the want, and none in the Union is fully adapted to meet it. The professor, too, whose mind from long and continued study, becomes imbued with this knowledge, would always be ready and at hand to communicate at the moment and in a reliable manner, whatever the calls or exigencies of the times or of trade may require. *The Chamber of Commerce* of the city would be connected closely with the professorship, having perhaps a common hall and mutually promoting each other's interest.

The endowment of such a branch to the University could be secured by a subscription for twenty or twenty-five thousand dollars, yielding an annual interest of two thousand or two thousand five hundred dollars. This would be the fixed remuneration of the professor whose sole and entire labors are obtained, and who should be allowed in addition as a further stimulous to exertion and reward for such services, certain moderate fees from individuals attending his classes or private lectures, with the exception of those whose means are limited, and who shall receive the advantages free.

The State should be required to furnish the appropriate hall in the University, which it will undoubtedly be happy to do, and make a further provision annually towards the library, say, perhaps, five hundred dollars more. It will be seen directly how this money shall be expended.

We shall now procced to make a brief exposition of the duties of the professorship, its organization, &c., and give the outline of its labors. In this we are without guide from any other quarter, but give our own views, the result of long and continued reflection upon these matters.

PROFESSORSHIP OF PUBLIC ECONOMY, COMMERCE AND STATISTICS.

Embracing the Theoretic and Practical Departments.

I.—THEORETIC.

Origin of Society and Government; Theory, Forms, and Ends of Government; Rights, Duties, and Relations of Governments; Sources of National Wealth and

Progress, and Causes of National Decline; Production, Distribution, and Consumption of Wealth, with the Laws appertaining thereto.

II.—The Practical.

Statistics of Population and Wealth in their application to
Commerce,
Agriculture,
Manufactures.

1. History and Progress of Commerce, its Principles and Laws; Home and Foreign Commerce; Tariffs, Treaties, Life Insurance, Roads, Canals, Shipping, and Revenue, Systems of Reciprocity; Balances of Trade; Mercantile and Navigation Systems; Colonies and Colonial systems; Banks, Finances, Accounts, Transportation, Book-keeping, Principles of Merchant Law; Commerce of Nations Ancient and Modern; Geography of Commerce, Commodities of Commerece, etc., etc.

2. Progress and Results of Agricultural Science; Principles of Agriculture; Comparative condition of Agricultural, Commercial, and Manufacturing Communities; Statistics of Agriculture, etc.

3. Origin and Progress of the Manufacturing System; Its Relation to the other Pursuits; Invention and Machinery in Manufactures; Condition of the manufacturing Classes; Statistics of Manufactures, &c.

Text-Books for this Course:

Locke's Essays on Government; Lieber's Political Ethics and Hermeneutics, Montesquieu's Spirit of Laws; Smith's Wealth of Nations; McCulloch's Commercial and Geographical Dictionary; Say's Political Economy; Vethake's Political Economy; Carey on Wealth; Stephen's Progress of Discovery and Maritime Commerce; Heeren's Commercial Researches; Vincent's Commerce of the Ancients; McGregor's Commercial Legislation; Annual Reports American and Contemporary Governments.

It will be seen that the project covers a wide field, and one the most interesting which could possibly be imagined. Of course it would be impossible to treat in detail all of these subjects, but a sufficient view might be taken of them for all general purposes by every student. Some would of course be glanced over, whilst others being of higher consideration and importance, would receive elaborate notice and exposition. In the successful progress of the University, it might be found, too, at some other day that the labors of the professorship could be divided, giving to the practical and theoretic, different departments and different professors.

The division we have made of subjects needs little explanation. They run naturally one into the other, and it is necessary to make the beginning in the proper place. For example, of how much importance is it to be understood among merchants from the constitution, theory, and objects of government, how far they should interfere in the practical and industrial pursuits of life. How many salutary lessons will be learned from a knowledge of the undue interferences which history records! This, with what is generally known as *political economy*, or

what we designate *public economy*, are embodied properly in the course.

Political discussions would forever be excluded from the Chair. Whatever may be the views of the professor in relation to any matter or matters connected with commerce or manufactures, and which are involved in the excited controversies of parties, he shall present them only in connection with the views of either side fairly, and refer the student to his own reflections for conviction, after a careful consultation of the text-books, and authorities. This can as easily be secured as a professorship of the evidences of Christianity, to be found in many colleges, but excluding rigidly all sectarian views and theological discussions.

It should be required from the professorship to prepare and deliver twelve public lectures each year, free to every one, upon subjects determined in its organization. For example, upon the "*Sources of National Wealth and Decline;*" *on the* "*History and Progress of Commerce;*" *on the* "*Foreign Commercial Relations of the United States, including our Treaties;*" *upon* "*Finance;*" *on the* "*Results of Agriculture and the Advancement of Agricultural Classes;*" *on* "*Manufactures;*" *the* "*Science of Statistics;*" *the* "*Geography of Commerce;*" *the* "*Commodities of Commerce;*" *the* "*Literature of Commerce,*" *etc., etc.* The lectures to be of a practical character, and perhaps published eventually, under the auspices of the University, as one of its text-books, and as a work to be prized and consulted in every part of the Union. Such a volume prepared with all the light afforded in the libraries and collections of the University would be complete.

For the Library, in addition to all the standard periodicals and the most select journals in the world relative to commerce, commercial pursuits, agriculture, manufactures, statistics, &c., may be mentioned the following works, a very large portion of which we will venture to say could not be obtained at this time in our country, and scarcely any of them in our city. We make this list from our own library and from a catalogue published by Mr. McCulloch, extracting only the most approved. Many other works equally valuable we could enumerate were it necessary, and we could enumerate maps, charts, etc., etc., which are appropriate to the department. With this catalogue we conclude our observations, in the hope that what has been said will excite public attention upon the subject, and ensure from our wealthy and enterprizing merchants such action in the matter as we think they will be proud to take. Now is the time for action; who will take the matter in hand and charge himself with the important service?

LIBRARY OF THE CHAIR OF PUBLIC ECONOMY, COMMERCE AND STATISTICS.

Œconomics.—Stewart's Inquiries in Political Economy; Lauderdale on Public Wealth; Smith's Wealth of Nations; Ricardo's Political Economy and Taxation; Malthus' Works on do.; Torens on the Production of Wealth; M'Culloch's Works; Dr. Cooper's Treatise on Political Economy; Cardoza's do.; Whatley's do.; Chalmers' do.; Scrope's do.; Seniors' do.; Carey's Principles of Political Economy; Quincy's Logic of do.; Hume's Essays; West on Land and Capital; Ricardo's Dialogues; Bailey on Values; Jones on Wealth and Taxation; Boileau's Introduction to Political Economy; Young's Political Arithmetic. Foreign Works of Isnard, de Tracy, Say, Garnier, Ganilh, Douffroy, Sismondi, Droz, Blanqui, Rau, Chevalier, Rossi, Verri, Becarria, Gioja, Pecchio, Munoz, Ward, Ortiz, Guarina's Estrado, Dictionaire d'Economie, Scrittori Classici Italiani, di Economia Politica, etc., etc.

Commerce.—Robertson's Mappe of Commerce; Roberts' Treasure of Trafficke; England's Treasure by Foreign Trade, by Thos. Mun; Fortrey's England's Interest and Improvement; Coke's Treatises on Trade, etc.; England's Great Happiness; Brittania Languens; Childs' Discourse of Trade; Dudley North's Discourses on Trade; Davenant on the Balance of Trade; King's British Merchant; Woods' Survey of Trade; Defoe's Plan of English Commerce; Gee's Trade and Navigation of Great Britain; Carey's Discourse on Trade, &c.; Dobbs on Trade of Ireland; Decker on the Decline of Trade; Tucker on the Trade of France and England; Tucker on Commerce and Taxes; Tucker on Trade of Turkey; Bell's Vindication of Commerce and the Arts; Postlethwayt's Dictionary of Trade and Commerce; do. Commercial Interest of Britain; Cantillon's Analysis of Trade; Rolt's Dictionary of Trade; Mortimer's Dictionary of Trade and Commerce; Mortimer's Elements of Commerce; Tucker's Tracts on same subjects; Sheffield on American Commerce; do. on Irish Commerce; Oddy's European Commerce; Mills' Defence of Commerce; M'Culloch on its Principles and History; Pitkins' Commerce of the United States; Hagemeister on Russian Commerce; Macgregor's Commercial Statistics; Melon's Essay on Commerce; Savary's Dictionary of Commerce; Condillac, du Commerce et Le Gouvernement; Ricardo's Traité du Commerce; Arnauld's Balance du Commerce; Sismondi, Laboulinierre, etc., on Commerce; Douglass' North American Settlements; Bacon's Colonization of the Free States of Antiquity; Moseley's Treatise on Sugar; Brougham's Colonial Policy; Edwards' West Indies; Bliss' Colonial Intercourse; Bliss on the Timber Trade; Martin's Statistics of British Colonies; Merivale's Lectures on Colonization and Colonies; Mun on the India Trade; Robertson on Ancient Communication with India, and Modern Trade with it; McPherson's European Commerce with India; Milburn's Oriental Commerce; Chitty on the Laws of Commerce, Manufactures, &c.; Hooper on Ancient Measures; Reynardson on English Weights and Measures; Arthbutnott's Coins, Weights and Measures; John Quincy Adams' Report on Weights and Measures; Gordon's Universal Accountant and Complete Merchant; King's British Merchant; Hertslet's Treaties of England; Evelyn's Navigation and Commerce; Anderson on Commerce; Macpherson's Annals of Commerce; Vincent's Commerce of the Ancients; Stephens' Progress of Discovery, Navigation and Commerce; Cooley's Maritime and Inland Discovery; Heeren's Commercial Researches; Huet's History of Commerce; Depping's Histoire du Commerce; Marin's Commercio d'Veneziani; Petty on Money; Locke's Treatises on Money; Sir Isaac Newton on Coinage; Leake's History of English Money; Harris on Money and Coins; Snelling's Works on Coinage; Merrey on the Coinage of England; Thornton on Paper Credit; Foster's Commercial Exchanges; Liverpool on Coinage;

Blake on the Course of Exchange; Rudong's Annals of British Coinage; Gilbert's History of Banking; Gallatin on Currency and Banking in the United States; Gouge's Treatise on do.; Carey's Credit System; Tucker's Theory of Money and Banks; Tooke's History of Prices.

Agriculture, Manufactures, Internal Improvement, and Statistics, etc., etc.—M'Adam's Observations on Roads; Parnell on Roads; Phillips' Inland Navigation; Woods' Treatise on Railroads; Petty's Essays on Political Arithmetic; Works of Arthur Young; Dickson's Husbandry of the Ancients; Chalmers' Comparative Strength of Great Britain; Colquhoun on British Empire; Loudon's Encyclopædia of Agriculture; McCulloch's Statistical Account of British Empire; Porter's Progress of the Nation; Porter's Tables of Revenue, Population, etc.; Tucker's Progress of the United States in Population and Wealth; Holland's History of Coal and the Coal Trade; Fraser's Fisheries of Great Britain; Elking's Greenland Trade and Fisheries; Scoresbey's Arctic Regions; Murray's Polar Seas; Babbage's Machinery and Manufactures; Baine's History of Cotton Manufactures; Schrivenor on the Iron Trade; Ure's Dictionary of Arts, Manufactures and Mines; Bischoff on Woollen and Woollen Factories; Slater's American Manufactures; Morgan's Treatise on Life Insurance; Edmond's Tables on do.; Morgan's Essays on Probabilities Applied to Life Insurance; Bentham's Defence of Usury; Botero's Cause of the Greatness of Cities; Benjamin Franklin on the Increase of Men; Hume on Populousness of States; Short on Decrease of Mankind; Price, Wales, Malthus on English Population; Summer's Treatise on the Records of the Creation; Saddler's Law of Population; Allison's Principles of Population; Hawkins' Elements of Medical Statistics; Thackrah on the Effects of Arts, Trades and Professions on Health and Longevity; Eden's History of the Laboring Classes and State of the Poor; Walker on Pauperism; Carey on Wages; Farland's Inquiries Concerning the Poor; Pratt's History of Savings Banks; Prostitution dans la ville de Paris, par M. Parent Duchatelet; Dalrymple on Feudal Property; Maugham on Literary Property; Godson on Copy and Patent Rights; Blair's Slavery Among the Romans; Blandinel on the Slave Trade; Phillips on the National Debts; Saxby on the British Customs; Sinclair on the Revenue of the British Empire; Dr. Hamilton on the National Debts; McCulloch on Taxation; Dr. Davenant's Political and Commercial Works; Beckman's History of Inventions and Discoveries; Jacobs on the Precious Metals; Public Economy of Athens, by Boeckh; Vaughan's Age of Great Cities.

Art. VI.—COMMERCE, NAVAL AND MILITARY RESOURCES OF CHARLESTON.

HER GEOGRAPHICAL POSITION.—MILITARY AND HARBOR DEFENCES. IMPORTANCE AS A NAVAL DEPOT.—FACILITIES FOR BUILDING GOVERNMENT VESSELS.—PUBLIC SPIRIT OF HER MECHANICS DISPLAYED IN RECENT MOVEMENTS.—COMMERCIAL AND AGRICULTURAL RESOURCES.—TRADE.—EXPORTS.—MANUFACTURES.—POPULATION.—SOIL AND CLIMATE.—PAST PROGRESS AND FUTURE PROSPECTS.

THE proud soubriquet of QUEEN CITY OF THE SOUTH is one by which in filial partiality her devoted sons have been always accustomed

to distinguish the old and venerated metropolis of Carolina, from her competitors in a long and arduous struggle for preeminence.

We yield to New Orleans the palm of commercial superiority and the proud distinction of the Grand Emporium of the *South-West*, while looking to the important location of Charleston as an Atlantic seaport, the fond dream of her future greatness as the emporium both in commercial and agricultural superiority, of the *South East*, can never be dispelled from our cherished hopes and ardent longings.

The limits of an article like this will not admit of any extended view of her past history, early settlement, internal laws and arrangements, or manners and customs of the people of this ancient and hospitable city. We are now simply to speak of her commercial, military, agricultural, and naval importance and resources, and in connection with these subjects to present to view the advantages of climate and soil with which this and adjacent sections of Carolina have been blessed; and the talents both literary and practical with which her citizens have been gifted. A combination of resources having a direct bearing upon the subject we propose to consider, viz.: *her superior claims to at least equal consideration in the distribution of public benefits by the government of the United States.* Such a substantial recognition of her merits at Washington as is manifested in the partiality shown to other cities of but little greater importance, would we think give an impetus to every department of trade and commerce, and infuse a spirit of energy and enterprise into the popular constitution, which would soon have the effect of casting off from her name the stigma of inertness and "masterly inactivity," with which it appears to be a matter of supreme delight in some quarters to brand her.

THE GEOGRAPHICAL POSITION

of Charleston is such as to demand for her an extensive foreign trade. (The city is at a distance of but seven miles from the ocean.) Were her national advantages proportionably improved, Charleston would share abundantly with New York, Philadelphia, and the other large commercial cities, both the foreign and domestic commerce of the United States; and were the prejudices of strangers capable of being entirely removed, might command the whole trade of the Carolinas, Georgia, and Florida. The increased facilities of railroad communication serve to place her in convenient proximity with Augusta, an important outlet to the to the interior of the neighboring State of Georgia; at the same time another branch opens a direct intercourse with Columbia, the centre point of a rich back country. Again, a third branch

now in progress is contemplated to reach Camden, S. C., there to unite with the projected road of our North Carolina neighbors, from Wilmington, the nucleus of an extensive country trade, and at present the southern extremity of a long line of northern railroad travel. Steamboat navigation to Savannah throws her into juxta-position with another vast section of Georgia, while abundant river and canal navigation opens to her the trade of the adjacent low country and islands. Along the Santee canal a large portion of the produce from the Upper Santee, Congaree, Broad Saluda, and Wateree rivers, passes in boats, carrying from one hundred to one hundred and fifty bales of cotton. An immense quantity of timber is rafted down the Edisto and other rivers in the vicinity.

The exposed situation of this city renders her peculiarly dependant upon the protection of government in time of threatening danger. The concentration of a military force greater than she has ever been provided with in the long and happy interval of peace, which has paralyzed the sources of national defence in the neighborhood of Charleston, would seem to be a measure, the expediency of which could hardly fail to be appreciated. It will not do for government to leave us to protect ourselves with a handful of undisciplined militia, who cannot be expected to possess much practical acquaintance with the science of arms. And yet, at the very period when most required, we have been more than once called on to surrender the scanty force at Fort Moultrie, to fight Indians or rancheros, leaving the more civilized and enlightened citizens of this free and happy republic to man their own dilapitated forts, and fight their own unequal battles against foreign invaders, should they think proper to make their appearance.

Military and Harbor Defences.

The internal military government is vested in a military guard, composed of a captain and three junior officers, in command of one hundred rank and file. The efficiency of its police may be inferred from the fact that she has long since taken away from a sister city and appropriated to herself, by almost universal consent, the enviable distinction of the "city of brotherly love." Night broils and pitched battles between lawless mobs and constituted authorities, are occurrences of which her citizens can only form an indistinct idea by reading the northern newspapers.

Among the volunteer corps a considerable degree of military emulation is kept up, and the same feeling must animate every officer and soldier who desires to sustain his popularity among the rest. Even

among the best companies, where such a feeling of *esprit de corps* is not to be looked for from their imperfect organization, measures for the general benefit have been adopted with an unanimity which betokens a more promising condition of things in this hitherto neglected department of public service.

Connected with the citadel in Charleston is a military academy on the West Point system, which has been in operation for several years, and which has given birth to a well organized and admirably drilled corps of young cadets. This company of volunteer soldiery reflects high honor upon the military character of the State and the gallant and experienced officer now in command of the citadel. The manly and dignified bearing of the cadets, the moral and affable demeanor which distinguishes them as gentlemen, and added to this the generous spirit of emulation which pervades them as a well organized corps, are subjects of daily observation, which have rendered them quite a favorite class with the citizens.

The harbor of Charleston is formed by the waters of the Cooper and Ashley rivers, which run parallel with each other for about six miles. The inner harbor is defended by Fort Moultrie, on Sullivan's Island; Fort Johnson, on James' Island, and Castle Pinckney, immediately opposite the eastern side of the city. During the Cherokee war a plan of fortification, of which the present White Point Battery is a noble relic, was entered upon but discontinued after the expenditure of a vast sum of money upon it. The fortification was to consist of 'a horn-work built of tappy,' flanked with batters and redoubts at proper distances, and extending from river to river."*

Importance as a Naval Depot.

The importance of Charleston as an eligible site for a naval depot, has been already recognized at Washington in appropriations for the establishment of a yard, which has been in operation now for five years. With an extensive and rich back country, capable of supplying the whole navy of the United States with stores, easily accessible by means of the increased facilities of steamboat, canal and railroad communication; the greatest abundance of timber for building; the best of mechanics; a spacious harbor; a ship channel sixteen feet water at ebb tide, and altogether a safe coast to enter upon; with a climate decidedly favorable to health, as we propose in another place to show; and a respectable share of public spirit on the part of her citizens, as recent movements have demonstrated, this city presents advantages, for the

* "Dr. Hewitt's Historical Account of South Carolina and Georgia, 1799."

useful application of which her representatives in Congress have been for years contending, with but a limited measure of success. A little perseverance has secured her, nominally, the possession of a navy yard,* but she has been slighted latterly in the disposition of naval receiving vessels. During the years 1843 and 1844, the U. S. schrs. Flirt, Wave and Onkahyee were successively stationed at this yard as receiving vessels. This circumstance attracted the attention of small cruizing vessels to her port for some time, and in consequence several departments of trade were inspired with a temporary activity and energy, which rendered very popular the anticipation of the permanent establishment of these vessels at the navy yard. Shortly after, a naval recruiting rendezvous was opened, in 1843, under the general superintendence of the officers there on the station, and this establishment was for a considerable period, a busy scene of activity. There was no deficiency of sailors, and no difficulty in enlisting them; there were more men shipped from here than from any other station except New York, in the same period of time. After some time, however, had elapsed, the purposes for which the rendezvous had been opened, having been accomplished, it was closed, and so remains at present. The recognition of our claims as an important depot, would have the effect of re-opening all of these avenues of employment. And why should these not be recognized? Let any one look at the annexed Table, and decide whether we have been unprofitable servants:

—TABLE—

Showing the amount of Revenue collected from the District of Charleston by the General Government, from the commencement of the Government, to the year 1825, inclusive:

1791,	$534,783 00	1809,	$378,778 63
1792,	351,257 71	1810,	566,509 66
1793,	354,660 59	1811,	334,869 32
1794,	655,519 63	1812,	429,179 93
1795,	709,804 83	1813,	251,844 86
1796,	52,443 97	1814,	126,046 68
1797,	692,957 12	1815,	1,408,863 41
1798,	238,622 03	1816,	1,356,927 87
1799,	846,465 28	1817,	1,616,460 75
1800,	812,698 99	1818,	1,245,980 87
1801,	1,119,688 29	1819,	734,758 38
1802,	260,909 37	1820,	549,866 04
1803,	639,656 61	1821,	511,852 90
1804,	707,058 33	1822,	780,471 21
1805,	837,849 49	1823,	735,000 00
1806,	665,085 14	1824,	741,038 00
1807,	728,382 56	1825,	701,003 00
1808,	309,685 90		
		TOTAL,	$22,337,381 16

Thus we see that South Carolina has paid in customs to the gene-

* Established in 1840.

ral government, in the space of thirty-five years, upwards of TWENTY-TWO MILLIONS OF DOLLARS. Large amounts are thus annually drawn from her resources for the advantages of other States, and it would seem but just that a portion, if not the whole amount of revenue collected by the government from the customs of this State, should be disbursed in and for the promotion of the prosperity of her seaports and the advancement of the interests of every department of trade in which her citizens are engaged.

FACILITIES FOR BUILDING GOVERNMENT VESSELS.

Few sections of country are better provided in this respect than the middle and low country of South Carolina. Timber of every sort, in most luxurious abundance, is procurable with but comparatively little expense, and little or no delay in transportation.

The pitch and yellow pine, (*Pinus tæda et Palristus,*) of Carolina, attains a heighth of upwards of one hundred feet, with a beautiful straight stem two-thirds of the way, and is used extensively for masts of vessels. The Carolina live oak (*Quercus Virens*) grows on lands adjacent to the salt water. It is the most durable of oaks. Its trunk is short, sometimes six and seven feet diameter, and its large crooked branches spread over a considerable extent of ground. This oak yields the best of timber for ship building. Besides this, we have every other variety of oak. The black walnut tree (*Juglans Nigra*) grows to a respectable heigth, its timber is much used in making cabinet work, and is very little inferior to mahogany. The red cedar (*Juniperus Caroliniana*) makes durable furniture, posts, etc., it is nearly as lasting as stone. The holly,—prickly leafed red berry,—(*Ilex Aquifoluim*) is used by cabinet makers for inlaying mahogany. Its wood is very white and handsome. The American white ash (*Fraxinus Alba*) grows forty or fifty feet high; the timber is used extensively. The Carolina cypress tree (*Cupressus Disticha*) is sometimes thirty feet in circumference, the wood is durable and easy to work, large canoes requiring six or eight oarsmen, are sometimes constructed from a single tree. They afford plank and timber for ships and various other purposes. These are only a few of the principal trees which abound in the vicinity or within easy communication with the city.

There are at the present time, 1847, great numbers of mechanics in Charleston, more or less connected with the various departments of labor incidental to the establishment of a depot for building naval vessels. Among these we rank shipwrights, shipjoiners, boat-builders, block and pump makers, iron founders, black and whitesmiths,

brass founders, coppersmiths, sailmakers, riggers, turners, painters, cabinet makers, block makers, ship chandlers. All these classes, and numerous others, will be *directly* benefited, while the baker, the butcher, grocer, tailor, shoemaker, tanner, the lumber, wood and coal merchant, hardware and cutlery vendor, rope maker, and almost every other working man in the community will find his services brought into abundant requisition.

The frigate John Adams, it will be recollected, was built in Charleston a great many years ago. It is not generally known, perhaps, that this place was, as far back as 1825, used as a naval depot under the government of the late Commodore Renshaw, who has thus been twice placed in the same command.

Recent Movements among the Mechanics.

The attention of our mechanics and others interested, was some time ago called through the newspapers to a late Act of Congress, authorizing the building of thirteen sloops of war, of wood or iron, and the completion of all the vessels now on the stocks at the different navy yards, thus affording employment to all of our northern mechanics. The writer of this, among others, endeavored to draw public attention in this way, to the subject: The various suggestions which then followed, demonstrating the importance of immediate action being taken on the subject by our own mechanics, in order that their claims to an equitable proportion of the spoils might be properly presented to the attention of the Navy Department, resulted in a public meeting of the mechanics being called, during which the matter was considered and taken in hand in a prompt and enterprising spirit. The meeting appointed a committee of mechanics to act as a joint committee of consultation, with a delegation from the Charleston Chamber of Commerce, and another from the City Council, who were instructed to report at a subsequent meeting. This committee assembled and drafted a memorial to Congress, which was first signed by the mechanics present, and then left at the different printing offices for the signatures of the citizens generally. The memorial has, so far, been unnoticed, but will, doubtless, be again pressed upon Congress.

From repeated conversations with the most respectable and intelligent of our mechanics, the writer has been gratified to find that a disposition generally prevails among them to enter into honorable competition with those of other places, for undertaking work on the most reasonable and desirable terms, and in the most workmanlike manner, and that a feeling of unanimity on this point exists here which augurs

favorably for the success of any measure which may be set on foot for the general benefit. No new project can be hopefully prosecuted without this feeling being encouraged and sustained. All petty jealousies should be cast aside as trifling in the comparison, when weighed in the balance against the future popular prosperity. There is ample room for all in such an enterprize. The united force of all the industry, skill and practical judgment which can be brought to bear upon the result must be necessarily called into action. The benefits will be extended from the working classes more immediately connected with the active operations throughout all the various ramifications of trade, commerce, and even professional industry. In such a cause well may the motto of the people be

"*United* we stand,
Un-Divided we fall!"—yet still

and bear with fortitude whatever may be the issue.

Commercial Advantages, Trade, Exports, and Population.

A more judicious selection for the site of a commercial town could not have been made. In former years her commercial prosperity was great. The average nett amount of duties collected by the general government at Charleston for the years 1815–16–17–18, exceeded *one million two hundred and fifty-seven thousand dollars.* The value of the articles shipped to foreign ports in 1824, amounted to upwards of seven millions, and from October, 1824, to the end of the following year, to twelve millions of dollars. The amount of tonnage which cleared for foreign ports during the same period, was between eighty and ninety thousand, and the amount of duties collected, nearly eight hundred thousand dollars. The amount of exports to the different ports of the United States during the same time, has been estimated at eight million five hundred thousand dollars, which added to the seven millions already stated, presents an amount of exports fully equal to, if not exceeding that of any other city in the Union. In 1799, it was more than ten, and in the following year very little less than fifteen millions. The exports of rice during a lapse of between twenty and thirty years in the early period of its exportation, very nearly doubled itself previously to the expiration of that time.

The statistics of the trade of still later years tell well for the amount of business done. Previous to the great revulsion in commercial affairs in 1837, the wharves presented a scene of the most lively interest. Vessels crowded the docks, arriving and departing. The following table of exports of cotton and rice immediately antecedent to

that memorable period, has been politely furnished by an intelligent merchant of Charleston:

	From Oct. 1, 1835, to July 12, 1836.			From Oct. 1, 1836, to July 12, 1837.		
	Cotton.			Cotton.		
	S. Island.	Upland.	Rice.	S. Island.	Upland.	Rice.
	Bales.		*Bbls.*	*Bales.*		*Bbls.*
Liverpool,	9,397	79,800	5,289	9,200	72,007	9,699
London,		2,927	6,781		1,541	5,549
Greenock and Glasgow,	711	11,468	53	520	12,797	11
Cowes and a Market,		354	955		203	1,570
Havre,	3,493	41,103	5,003	2,080	31,153	5,506
Other French Ports,		10,017	3,783		5,617	3,173
Holland,		8,520	11,130		1,920	8,983
North of Europe,		10,369	17,264		7,561	13,114
Other Foreign Ports,		6,192	126		2,936	761
West Indies,		3	20,731		199	20,053
Ports of the U. States,	675	43,002	44,380	269	23,910	37,292
	14,276	214,415	115,535	11,957	159,844	105,711

The census of 1840 exhibits a decrease of population to some extent which may be accounted for from various causes. There can be but little doubt that the principal source of that intolerable distress which throws so many out of employment is the annual overstocking of particular professions and occupations to the total exclusion of others. Many who have been brought up to the attainment of a professional or mercantile education, and who have been compelled to seek other climes for support, might have found ample means of advancement in following some good trade for which their natural or constitutional abilities would have better adapted them.

Agricultural Resources.

Beside the culture of cotton and rice, the two great staples of Carolina, the soil and climate of the lower sections of the country adjacent to the city are highly favorable to the abundant growth of almost every article of produce raised in the northern States. The olive and the vine have both been cultivated a little further north than Charleston. The latter would, perhaps, in these cold water times, prove not as profitable as might be desired. Tobacco and indigo have both been staples of Carolina. On the sea islands, in the immediate vicinity of the city, where the richest and most valuable crops of cotton are made, instances have occurred of from eighteen hundred to two thousand lbs. of cotton in the seed being raised in one season from a single acre of land. Rice can be cultivated in any part of the State, particularly in the lower sections, where the soil will permit its growth. In 1759, ten thousand pounds of raw silk were raised in the State; sugar, cassia, oranges, lemons, figs and pomegranates have all been successfully

raised. Many portions of the country present admirable advantages for raising stock. The country abounds in manures arising from rich bottoms, oyster shell beds, marls, salt marshes, cotton seed, etc.

The labors of distinguished members of the State and District Agricultural Society, have accomplished much in the various departments of agricultural science. The society established at Charleston is composed of the most intelligent planters in the State. The recurrence of the sickly season, when (however paradoxical this circumstance seems destined ever to appear in the eyes of some of our brethren of the up-country) *the planters generally resort to the city for health!* brings together a very large portion of the talent, enterprise, and practical knowledge of the agricultural community, by which means the benefit of free communication is obtained. The intercourse of these men is remarkably free from the petty jealousies and undermining dispositions of many others. The low-country planters are equally distinguished with those of the upper districts for the abundant display of that old-timed hospitality, which has been conferred by unanimous consent as a remarkable characteristic of the old Palmetto State. Charleston being the chief city, of course concentrates the larger portion of the wealth, respectability, talents and influence of this most independent and generally esteemed class of citizens. Most, if not all of the leading agriculturalists are actively engaged in promoting the objects of the State and District Society, and many have already developed a career of practical usefulness which will redound to the prosperity and improvement of their native soil.

Climate and Soil.

Of the peculiarities of soil in the low country, we have already spoken. In advantages of climate, we are highly favored. Few large cities have ever been so peculiarly exempted from epidemic disease. The same atmospheric influences which render so delightful and attractive some portions of Italy, Turkey, and the south of France, conspire to make this one of the pleasantest locations for health and comfort. The degrees of extreme heat are less in the city than in the interior. In some of the upper districts, during the summer of 1845, the thermometer, in the month of June, reached *one hundred*, while in the city ninety-six was the ultimatum; and it is but seldom in the depth of winter that the air is too piercing for exercise, while our neighbors among the mountains are surrounded with snow fortifications. With the exception of a few fatal complaints among the children, the much

dreaded summer months are comparatively free from unusual sources of disease. During the last winter, the weekly bills of mortality averaged not more than eight to ten or twelve instances of fatal disease, and on several occasions, but *four* deaths were reported out of a population of nearly *thirty thousand* human beings! That more than Egyptian plague, the yellow fever, has now almost ceased to claim existence, though so great is the power of prejudice that the idea of its presence at particular seasons will probably never be banished from the minds of those who now look upon a visit to the city after the month of April, as an omen of certain death. The ravages of this dreadful scourge of humanity in past times, may be traced to the inexperience of physicians, who at that time felt their utmost skill and ingenuity provokingly baffled by an agency which subsequent experience has almost entirely disarmed of its destructive powers. The vigilance of the city authorities has in later years proved successful in removing those local causes of disease, and prohibiting the introduction of foreign elements of mischief to such an extent as to provide for the public health an ample measure of security during the seasons most subject to their influences. The fatal effects of the yellow fever from its first appearance early in the commencement of the last century, to its temporary cessation fifty years after, and again, from 1792, after an interval of complete exemption for forty-four years, to 1808, was confined chiefly to the unacclimated. The recurrence of the same distressing visitation during the summer of 1824, and several succeeding years, enabled the active exertion of medical skill to overcome its virulence in an eminent degree, and since that period its visits have been less and less frequent. In the whole number of deaths in 1802, one of the most alarming seasons, there was *not a single native* of Charleston, though several were natives of the State and one of North Carolina, the remainder being mostly Irish, French, Scotch, English, and Spanish emigrants.

The small-pox is another old foe which has been encountered with signal success. Cases of this scourge, since the general introduction of vaccination have been indeed rare, and from the "angelic" nature of its visits," it may almost be said to have entirely deserted us. The first and most destructive inroads of this disease were almost simultaneous with those of the yellow fever, and doubtless contributed to create a panic, the effect of which will probably endure as long as the two diseases continue to find in their travels "a local habitation and a name."

Instances of longevity are not at all rare among her citizens. There are still living a respectable number of venerable revolutionary worthies actively engaged in the every day business of life, and enjoying a

degree of health to which many of their grandsons and daughters would be glad to attain. Salutary influence has been produced in the wonderful changes which have been worked of late years in the habits of particular classes of the people. The rapid strides which the temperance reformation has been making towards the remodelling of public sentiment with respect to "*genteel dissipation*," that deceitful and alluring but no less destructive bane of the higher classes, and the gradual lessons of past experience, which have develloped the true sources of social degeneracy and waning domestic prosperity. Where habits of temperance have been formed in early youth, it is not unusual with us to find cases of individuals who have lived very little short of an entire century, whose mental and bodily faculties remain as fresh as in the vigor of manhood. We have now a number whose ages exceed *ninety* thus favored in regard to health and intellect; and instances are enumerated in Carolina history of deaths in the immediate neighborhood of Charleston, at the advanced ages of *one hundred* and *one hundred and five!*

This, be it remembered, is in a *low country* climate.

Past Progress and Future Prospects.

In glancing over the past progress of Charleston, we find an innumerable combination of causes which have largely co-operated in retarding her onward career towards that long anticipated goal of prosperity which we believe she is still destined to reach. The ruinous policy of our government, the tendency of which has so long been to enrich particular portions of the confederacy at the expense of others, is the real source of the present inequality of incitements to enterprize, and the partial distribution of those privileges and benefits to which all are eqnally entitled. What signifies it that Providence has blessed us with unusual natural facilities and advantages if these do not of themselves give us additional claims upon the attention of "the powers that be." The great difficulty is that even when such claims are recognized, perhaps *a single* appropriation of the public funds is, by dint of importunity, *squeezed* out of the long-necked purse of the national treasury; and after a short-lived series of half way measures, the petitioners are left in the lurch with just enough of government patronage to originate projects which are necessarily abandoned for want of further support, and thus to render the whole matter superlatively ridiculous. The whole system of expenditure is characterized by a curious compound of prodigality and parsimony, the one applicable to the

gratification of a spirit of unjust favoritism, and the other to measures of great public utility.

Charleston has in its time suffered by the emigration to the West. Like all other large cities, her avenues of employment are not sufficient to afford to all her citizens those advantages of which the increasing thirst for acquisition of "the one thing needful" in wordly bliss, demands the more extended diffusion year after year. But it is not to this transient population to which she looks for support in her hour of need. Her important location will ever render her a valuable seaport. Her commerce cannot be much impeded by the loss of the surplus portion of her population. Her agriculturalists are becoming daily more and more sensible of the defects in long tried systems of culture, and are every day improving upon past experience. The introduction of manufactures will open new sources of employment and call into activity a large amount of dormant capital. The vigorous renewal of operations at her navy yard, at the unanimous demand of the people, will not only stimulate the industry and remunerate the labours of mechanics in all departments, but will give life and animation to trade of every description, and invite the additional influx of an active working population. Thus will not only her individual prosperity be promoted, but a precedent will be established by which the whole South may have cause to hope for a permanent abolition of the infamous code of justice which has heretofore excluded that devoted section from all participation in the distribution of the spoils to which it is at the same time compelled to contribute an unequal and unjust quota.*

Art. VII.—UNITED STATES BRANCH MINTS.

THE MINT AT NEW ORLEANS.—PROCESSES PURSUED OF WORKING THE PRECIOUS METALS.—STATISTICS OF COINAGE, ETC.

The branch Mints of the United States were established by act of Congress, on the third of March, 1835. The edifice of the New Orleans Mint, occupying, by perpetual grant† from the city, what was

* The reader by reference to the back numbers of this Review, will find all the detailed statistics of the trade and progress of Charleston, which leave at this time scarcely anything wanting. We particularly refer to the numbers for January, March, April, June, September, December, 1846, February, March, April, May, 1847.

† The act of conveyance was before Felix de Armas, notary public, on the 19th June, 1835, signed by George Eustis, attorney of the city corporation, and D. Prieur,

formerly called Jackson Square, between Barrack and Esplanade streets, Old Levee street and the river, was planned by William Strickland, architect. The building was begun in September, 1835, and finished in 1838, at a cost of $182,000. Total length, including the wings, 282 feet; depth of the main building 108 feet. The wings are 29 by 81 feet. In addition, the iron fence enclosing the square, outdoor improvements, the machinery, furnaces, fixtures, apparatus and implements, cost nearly $118,000, making a total cost of near $300,000. The annual expense to government in maintaining the Mint in operation, is about $52 000.

The first appointment of officers to this Mint was made in March, 1837, as follows:

David Bradford, Superintendent; removed in 1839. Edmond Forstall, Treasurer; removed in 1839. James Maxwell, Melter and Refiner; died in 1839. Rufus Tyler, Coiner; died in 1839. William P. Hort, Assayer.

In 1839, the Mint was reorganized by the appointment of the following officers:

J. M. Kennedy, Superintendent. H. C. Cammack, Treasurer, removed May, 1845. J. L. Riddell, Melter and Refiner. P. B. Tyler, Coiner; resigned April 1, 1847. Wm. P. Hort still holding the office of Assayer.

J. R. Macmurdo was appointed Treasurer in May, 1845. John Brooks was appointed Coiner April 1st, 1847. On the 6th of August, 1846, J. R. Macmurdo, Treasurer, became ex-officio Assistant Treasurer of the United States, under the Independent Treasury law. We may add the following, appointed by the Superintendent: F. W. Smyth, Clerk, annual salary $1,200; Martin Kennedy, Weigher, annual salary $1 2)0. Appointed by the Treasurer: O. B. Bradfute, Sub-treasury Clerk, annual salary $800.

Salary of Superintendent, $2,500; Treasurer, Assayer, Coiner, Melter and Refiner, each $2,000. Additional salary of the Treasurer

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Mayor, on the part of the city, and by Martin Gordon, Sen., on the part of the United States. May 9th, 1835, the city council "*Resolved*. That the use of the square of ground, etc., be ceded to the United States for the express and only purpose of a Mint; and if the United States government should hereafter remove the Mint, or cease to occupy it for such purposes, then the cession to be null and void."

Martin Gordon, Sen, Commissioner to build the New Orleans Mint, in his report of Nov. 20, 1835, to the Secretary of the Treasury, says, "by this liberal and patriotic act, the United States became possessed of one of the most valuable squares of ground in the c ty, *without any cost to the government*. The value of this donation has been estimated at little less than $500,000. Within a few years past a suit has been ente ed against the officers of the Mint, as possessors, by individuals claiming the Jackson Square as their private property by inheritance. Should their claims now pending be made good, it may cost the city something to make good the cession to the United States.

as Assistant Treasurer of the United States, $500. Residences in the Mint edifice are held by the Superintendent, Coiner, and Melter and Refiner. There are employed in the coining department thirteen workmen besides the foreman; in the melting department, six; in the assay department one; in the weigh room one; as door-keepers, night and day police, six. The average pay of these men is about $60 per month each.

Process of Coinage.

Silver and gold are coined at this Mint into dollars, halves, quarters, dimes, half-dimes, eagles, half-eagles and quarter eagles. Gold is presented to us in the form of foreign coin, bars, dust, and old jewelry; the most abundant foreign gold coins being English sovereigns, French Napoleons, patriot Doubloons, and the coinage of different German States; while the unwrought gold is principally from the State of Alabama. Mexican dollars constitute the greatest bulk of the material for silver coinage.

Any person bringing good precious metal to this Mint for coinage, is entitled to receive back in American coins exactly the same amount of fine gold or fine silver which he brings, without deduction or expense, the United States government taking upon itself the expense of coinage. If the bullion, containing both goid and silver, require the operation of parting, or if toughening be required, then the actual expense of these operations is deducted from the value of the bullion, in favor of the government.

Bullion is received by the treasurer, weighed in the presence of the owner by the weigher, who gives a receipt for the actual weight in troy ounces and decimals. If it consist of mixed coins or various bars, it is sent into the melting department, placed in a red hot, clean black lead pot, melted, stirred up, and mixed, and cast into a homogeneous bar. It is next given to the assayer, who cuts off a piece of the bar, rolls out the piece, clips it with shears, and weighs out exactly 1000 milligrammes thereof, which he wraps up in lead, and places upon a white hot dish of bone earth: the whole melts, and oxidizing, every thing present is usually absorbed by the bone earth but the silver or gold. If pure silver alone remain, its weight in milligrammes shows how many thousandths fine the bullion is. The result is, however, corrected by what is called the humid assay, which depends on a definite precipitation of chloride of silver from a solution of nitrate of silver, by definite measures of a solution of common salt of known strength. If the assay be one of gold, after the button of metal has been removed from the bone

earth, it is melted with about three times its own weight of pure silver, the alloy is rolled out and repeatedly subjected to the action of hot nitric acid, which dissolves and removes the silver, but leaves the gold. The latter is carefully washed, dried, annealed at a red heat, and subsequently weighed in milligrammes, by which the proportion of gold in 1000 parts is made apparent. With these data the assayer then estimates the value of the bullion, whereupon the treasurer, if called upon, as promptly as practicable, pays the amount to the owner.

Parcels of bullion of known value, are from time to time, delivered and debited to the melter and refiner, who manufactures the same into ingots for the use of the coiner. Upon the receipt of bullion, the melter and refiner assorts the bars into the following classes: A. Ready to be made directly into ingots. B. Requiring to be toughened. C. Requiring separation.

A. A melt is made up by arithmetical calculation, from bars of the class A., some above, some below standard in title, so that the result of melting and mixing may produce ingots 900-1000ths fine. In case of silver about 7000 troy ounces, equal to 480 lbs. avoird., are melted in a large cast-iron pot or crucible, surrounded by a charcoal fire, in a wind or draft furnace; and when the whole is in a state of fusion the mass is diligently stirred, and then, by hand, laded out and poured into smooth iron moulds, making slim ingots, about sixteen inches long. Gold is in like manner melted and cast into ingots in black lead pots, each holding about 1600 ounces, near 110 lbs. avoird. The assayer next ascertains that the ingots cast are of the legal fineness required, if not, they are condemned and have to be remelted. B. Bullion containing anything but gold, silver and copper, usually requires to be toughened, an operation commonly performed in the Mint by repeatedly casting nitre upon the surface of the melted metal, stirring it about, and then skimming it off with the dross from the base metal contained.

C. The mint processes followed for the separation of alloyed gold and silver, are as follows: In the first place the mixed bullion, if required, is melted with additional silver, so that the alloy may contain about three times as much silver as gold;—the melted metal is poured in a small stream from a height of a few feet into cold water, by which means it is obtained in a finely granulated condition; the granulated metal placed in a glass mattress, supported upon a sand bath, is boiled with nitric acid, which dissolves the silver, but leaves untouched the gold, in the form of a dark powder. The dissolved silver is poured into a tub of strong brine of common salt, by which it becomes converted into a white powder, the chloride of silver. After repeated

washing the chloride of silver is subjected to the joint action of metallic zinc and hydrogen gas, by which means it becomes changed to pure, finely-divided, solid silver. After being washed and dried, it is melted with nitre and borax, and cast into bars. The dark powder of gold is also carefully washed in hot water, dried, and in like manner cast into bars.

Consequent upon these operations, more or less gold and silver become mixed with ashes, dross, dirt, etc., etc. All these matters are finely ground and washed, smelted, etc., for the extraction of the precious metal. But there will still remain a valuable residue, for which reason the sweepings are ultimately treated like poor gold or silver ores, metallurgic operations, the performance of which have heretofore not been allowed in this Mint. The sweepings are, in fact, sold abroad.

The gold and silver ingots, cut and trimmed, and their fineness or quality approved by the assayer, are next transferred by weight, through the treasurers office, to the coiner. In the coining department they are repeatedly passed lengthwise betwixt smooth and powerful iron rollers, being annealed from time to time in a large annealing furnace, until by the compression, the metal assumes the form of long, thin strips. the thickness of which approximates to that of the coin to be manufactured. The annealed strips, covered with a thin coating of wax or tallow, are then taken to a Burton's drawing machine, where, being drawn between polished steel surfaces, on the principle of wire-drawing, the thickness is reduced exactly to the extent required. To attain this nice result, the steel surfaces are adjustable, and trial pieces are punched out and weighed. The drawing machine, as here arranged, is an admirable piece of mechanism. If the strip be drawn a fraction too thin, which seldom happens, it is condemned and returned through the treasurer's office, with all the residual clippings, to the melter and refiner, who consigns the whole to the melting pot.

The approved strips are next submitted to the action of a circular punch, which, at the rapid rate of one or two hundred per minute, cuts out the planchets or blank pieces of the required size for the coin intended. A most curious mechanical process is that next in order, raising milled edges upon the planchets. They are rolled with great velocity edgewise between approximating circular steel surfaces, so that raised edges are produced at a rate depending upon the size of the pieces, from one to seven hundred per minute. All the form-changing operations are now completed, preparatory to the actual coinage. Annealing and cleaning have next to be attended to. The planchets, with wax or tallow still adherent, are now heated to a dull redness in

iron recipients placed in the annealing furnace, and poured, hot as they are, into a vessel of diluted sulphuric acid, by which means all impurities are removed from their surfaces, the alloyed copper superficially dissolved away, and the clear, beautiful, dead-white appearance of pure unburnished silver is elicited. Adhering acid is washed away in water, and adhering water dried away by hot mahogany sawdust, in an ingenious rotating apparatus heated by steam, invented by the late coiner, P. B. Tyler.

From the peculiar position of New Orleans, it seems probable, now that this mint will, in the future, subserve much more important national purposes than were at first generally contemplated. The amount of native gold annually raised in Alabama is greatly on the increase; the acquisition of Texas will, ere long, bring us abundance of silver and gold, from the rich mines of San Saba, within her borders, and ultimately, we shall receive most of the produce of the numerous and abundantly productive mines of the adjacent Mexican States, now in our military possession. Precious metals unquestionably abound in western Arkansas, and great abundance of silver, associated with copper, etc., has lately been found in the copper regions bordering upon Lake Superior. A fair portion of all which this Mint will probably be instrumental in transforming into current coin. Moreover, we should bear in mind that vast hordes of foreign emigrant coins, for which cotton, sugar, and Western produce are exchanged, by this institution are put through a process of naturalization, by which they become wholly Americanized, and induced to remain permanently in the country.

The coining process consists essentially in compressing the prepared gold or silver blank, with very great force between engraven dies of steel, of extreme hardness and high polish. The dies are prepared for this Mint by impression from male dies at the Mint in Philadelphia. The letter O, placed usually under the eagle, is intended to designate the coinage at New Orleans. In times of old very simple means were used in the process of stamping money, such as blows by a hammer, or compression by a plain, ordinary iron screw-press, the whole being performed by human labor. Coining in Mexico, South America, and many other parts of the world is, said to be still conducted according to the latter method; but here, as in England, France, and elsewhere, the machinery for rolling, drawing, punching out, milling and coining, is driven by steam, and the coining presses in use are models of the great excellence to which the mechanic arts have attained. There are four presses in the coining room, forming a series, in respect to size and strength, adapted to the stamping of the various coins from the half-

dime to the dollar. The mechanical principle brought into play is the same as that in the ordinary printing press—the genicular or elbow power, by which, with sustaining parts of sufficient strength, an almost incalculable degree of pressure may be commanded. Each operating press requires a man to watch it, to oil the joints occasionally and to keep a vertical brass tube supplied with the blanks or planchets to be coined. The untiring press goes on, siezing with iron fingers from the tube, a planchet of its own accord, carefully adjusting it to the retracted dies, squeezing it with a degree of force sublime to contemplate, and then quietly and safely depositing it in the box placed to receive it. From eighty to one hundred and fifty pieces, dependent upon the size, are thus coined in one minute's time. The obverse, reverse, and indented work upon the edge, are all completed at a single effort of the press. Travel the world over, and you can scarcely meet with a more admirable piece of massive mechanism, than the new press in the New Orleans Mint, for the coinage of dollars.

Though stamped and perfectly finished, gold or silver does not legally become money until the coiner has formally delivered it, by counting and weighing, over to the treasurer. It must be seen that the pieces possess the weight required by law. If any prove too light upon trial, a circumstance that rarely happens, such are defaced and condemned to be remelted.

All nations that aim to preserve what is called public faith, are religiously scrupulous to maintain, as far as practicable, the weight and quality of their national coins, in correspondence with the legal standards which they fix upon. Acting with this view, our Government has established an annual trial before special commissioners, to test and verify the standard value of the coins of the preceding year. This trial is held at the parent Mint, in Philadelphia. Subservient thereto, it is the treasurer's duty to select assay coins indiscriminately from every parcel delivered by the coiner to the treasurer. The coins by him selected are properly labelled and formally placed in a tin box, secured by two locks, the key to one of which is kept by the assayer, the key to the other by the treasurer. The contents of this box are transmitted by the superintendent, through the Secretary of the Treasury, to the director of the Mint at Philadelphia, for the annual trial. The coinage of this Mint has thus far been approved, but it is worthy of remark that the average finess of the gold coins issued is a trifle better than the mean standard contemplated by law—the averrage value of a New Orleans eagle being about three-fourths of a cent greater than similar coins from the mints at Charlotte, Dahlonega, or Philadelphia.

Detailed Statement of the Coinage, year by year, at the Branch Mint, New Orleans, from the Commencement of its operations to the close of 1846.

1838.

	No. of Pieces.
Dimes	402,430
Amount	$40,243

Years,	1839.	1840.	1841.	1842.
Eagles,	———	———	2,500	27,400
Half-Eagles,	———	30,400	8,350	16,400
Quarter-Eagles,	9,396	26,200	7,380	19,800
Half-Dollars,	116,000	855,100	401,000	957,000
Quarter-Dollars,	———	425,200	452,000	769,000
Dimes,	1,291,600	1,175,000	2,007,500	2,020,000
Half-Dimes,	1,060,000	935,000	815.000	350,000

Years,	1843.	1844.	1845.	1846
Eagles,	175,162	118,700	47,500	81,780
Half-Eagles,	101,075	364,600	41,000	58,000
Quarter-Eagles,	368,002	———	———	66,000
Dollars,	———	———	———	59,000
Half-Dollars,	2,268,000	2,005,000	2,094,000	2,304,000
Quarter-Dollars,	968,000	740,000	———	———
Dimes,	150,000	———	230,000	———
Half-Dimes,	———	220,000	———	———

RECAPITULATION.

	Value of Gold.	*Value of Silver.*	*Total.*
1839	$23,490	$240,160	$263,650
1840	217,500	698,100	915,600
1841	85,200	555,000	640,200
1842	405,500	890,250	1,295,750
1843	3,177,000	1,391,000	4,568,000
1844	3,010,000	1,198,500	4,208,500
1845	680,000	1,070,000	1,750,000
1446	1,272,800	1,211,000	2,483,800

SUMMARY.

Total number of Pieces coined	26,978,127
" Value of Gold	$8,871,490
" Value of Silver	7,294,253
" Value of the Coinage	16,165,743

Art. VIII.—THE COTTON WORM.–ITS HISTORY, CHARACTER, VISITATIONS, etc.

Bayou Sara, June 1st, 1847.

To J. D. B. DE BOW, ESQ.:—

The following are some remarks on the nature of the cotton fly of 1846, being a sequel to a dissertation on the usefulness of a knowledge of the natural history of insects, written last winter. I send you that portion only which treats of the cotton fly as falling more especially within the province of your periodical. This manuscript would not have sought a place upon your pages had not my attention been drawn

to it by the ill-founded apprehensions of many planters concerning the *present* existence of the cotton worm, an event utterly impossible, for if it makes its appearance at all this season, it most certainly will not do so until the cotton plant has attained its greatest maturity. I see, also, in your Review a communication claiming to show the means by which the army worm may be effectually eradicated, in which is displayed the greatest ignorance as to the general laws which govern the insect world. The writer states that the chrysalis of the cotton fly may be ploughed up, and thus destroyed, etc. Now, these chrysales never go in the ground at all, but are invariably attached to something above the surface. This is a fact that could not have escaped the attentive observer. I ask how a chrysalis invariably formed above ground and incapable of locomotion is to work its way beneath the soil? As to the insect, on any condition, secreting itself in the earth, beneath the bark of trees, under fallen timber, etc., it is altogether a mistake if not an absurdity, and easier asserted than proved. In treating of the cotton fly in the following pages, my aim has been to found my assertions upon general principles, and though the practised entomologist may find some inaccuracies in the detail, yet I insist upon the principles as universal and incontrovertible.

Let us now pass to the consideration of the cotton fly, premising, however, before entering into an examination of this destructive little moth, that my remarks are intended less to enlighten others than to elicit information from some one who is better able to inform the public mind on this interesting subject. As for myself, I must confess that my limited observations do not justify me in coming to any positive conclusions, nor have by no means satisfied my curiosity, but my information, such as it is, I give in the following pages with the hope that however imperfect it may prove in the main, yet that some mite of information may be gleaned from it. It is impossible to think for a moment that this species of moth has escaped the observation of entomologists, for the plant upon which it feeds to the absolute exclusion of all others, (being the great staple production of many countries,) must have brought it into notice at various times and at various places. From its univorous nature, (to coin a word,) it must have been coeval with and inseparable from the existence of the cotton plant. My principal motive for broaching this subject is on account of the frequent remark made, and fears entertained ,that the army worm would become an annual plague. But since I have investigated their nature I have come to the conclusion that these fears are groundless, and that the cotton fly can never become naturalized in our climate.

Here then it would appear was an end of the cotton worm, for a season at least, for those which yet remain in chrysalis in the fence corners, will change to the fly in ten days. But where are now the cotton leaves upon which the pregnant female is to deposit her eggs? There is not one left. If they are placed on any other leaf the eggs may hatch, but the worm must perish, as we have just seen them perishing by myriads while wending their way through a various and luxuriant herbage in search of that food intended for them by nature. In ten days from the time that the worm becomes a chrysalis on the borders of the cotton fields, a host of flies are seen issuing therefrom: they go forth in search of food for their forthcoming progeny; now it is to be found their days are numbered, in ten more if they meet with no cotton leaves they themselves must die, and thus put an end to the whole race. But their search is continued, and now when the weary insect is ready to finish its term of days, a tender but sparse foliage crowns the leafless twigs of the cotton plant, on them the eggs are deposited: they hatch, the worm eats, returns again to its chrysalis. The cotton stalk still puts forth new leaves, they grow and expand until the fields again look green; ten days, aye, forty elapses, yet there is not a worm to be found. One would have thought that this second crop of leaves would scarcely have been sufficient for a single repast for them, yet the food that they so lately devoured with such voraciousness is now left untouched. What is the matter! Why don't they eat, their food is spread before them? Read on, the answer will be found in the sequel. Let us examine the cause. In nearly every fourth leaf we find a chrysalis writhing and contorting itself at the touch. Ah! here is the explanation of the difficulty, this is no ten days chrysalis, but that in which it is to hibernate, possibly for one winter, perchance for twenty. Let us take a pocket full of these home, and place them beneath tumblers and wait patiently to see what they will produce. If I had found a treasure my delight could not have been greater than that I experienced at the idea of unraveling this mystery. But man is prone to disappointment, as we shall soon see. About the fifteenth of November the insect appeared, but *mirabile dictu!* as different from the cotton fly as it is possible to suppose one insect could differ from another. It belonged altogether to a different family, a description of which I give, as follows:

Antennæ filiform; black, six lines in length. Palpi four; two external and two intermediate, the external white, twice the length of the other two, in shape angular, the angle projecting externally. The two middle are straight, scarcely perceptible over a strong light; they are of a dark color. Wings four; hymenopterous; incumbent, extend-

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Antennæ filiform; black, six lines in length. Palpi four; two external and two intermediate, the external white, twice the length of the other two, in shape angular, the angle projecting externally. The two middle are straight, scarcely perceptible over a strong light; they are of a dark color. Wings four; hymenopterous; incumbent, extend-

ing to and exactly even with the end of the tail; shape of the wings, which are small and extremely thin and delicate, are like that of a fan. Front legs half the length of the posterior, of a uniform orange color; the intermediate legs very little longer than the anterior; the thighs of a deep orange color, the rest of the leg annulated with orange and white. The posterior legs long in comparison to the others; thighs of a deep orange color, the rest of the leg annulated with black and white, the rings being larger than those of the intermediate. The trunk is of a uniform shining black, as would be the upper surface of the abdomen also, were it not for the very narrow white bands which connect the black scales together, giving to the abdomen an annulated appearance; these white lines do not encircle the abdomen, but terminate uniformly on the sides. On the under surface of the abdomen these white rings again commence, which are much larger than those on the upper surface, causing the abdomen to look almost white. The tail terminates in a bifurcated sheath, enclosing a long blunt sting, projecting considerably beyond the tail, and forming a very prominent feature in the general figure of the insect. This is a small slender insect, much longer than the honey bee but not so thick.

Now it is evident from its specific character, as well as from its parasitic nature, this insect belongs to that numerous class called *ichneumons*, of which there are upwards of five hundred species. As I am not at present in possession of any practical work on Entomology, I cannot determine the species of this ichneumon, but to show that it differs in some respects from the family to which it belongs, I will quote a paragraph from a work before me, in which are set forth some peculiarities belonging to that class of insects as a genus:

"The whole of this singular genus have been denominated parasitical, on account of the very extraordinary manner in which they provide for the future support of their young. The fly feeds on the honey of flowers, and when about to lay her eggs, perforates the body of some other insect, or its larva with its sting or instrument, at the end of the abdomen, and then deposits them. The eggs in a few days hatch, and the young larvæ, which resemble minute white maggots, nourish themselves with the juices of the foster parent, which, however, continues to move about and feed until near the time of its changing into a chrysalis, when the larvæ of the ichneumon creep out by perforating the skin in various places, and each spinning itself up in a small oval silken case, changes into a chrysalis, and after a certain period they emerge in the state of complete ichneumons."

It will be seen that there is a peculiarity attached to this ichneumon not included in the above description, that of appropriating the chrysalis as well as the larvæ of other insects, to the use of their young. All ichneumons that I ever read of spin their own chrysalis, but this is the prince of parasites, for not content with eating the substance of his neighbor, he seizes also on his house. So far as I have read concerning this curious family of insects, this is a nondescript. As an example of

The first eruption, as I am informed by an old planter, that this insect made on the cotton fields of Louisiana, was about the year 1820, when its progress was marked with the same utter destruction of the cotton crop as in the subsequent years of their appearance. It then disappeared until '40, a period of twenty years. There is something singular and unaccoutable in the periods of this insect, something vastly different from the periodicities of others which we find with us, for they appear to be governed by some fixed laws; the most of them are annual, very few biennial. Now, the grasshopper, house-fly and musquito may be looked for at the return of summer with as much confidence and certainty as we look for the revolutions ot the seasons. The cicada septemdecem never fails to make his appearance once in seventeen years. But who can tell whether the cotton fly will appear next year or fifty years hence? No scourge whether under the form of a devouring insect or that of a malignant disease, ever became annual in one particular place. Look at the locust of Egypt, suppose that voracious insect to become annual, the prolific valley of the Nile, once the granary of Asia and Europe, would become a howling desert. Look at the plague that devastates sometimes Smyrna and Constantinople, did the cause of that distemper act with the like intensity at each return of the season, those flourishing cities would long since have been numbered with Thebes and Memphis. Let the cholera or yellow fever prevail in New Orleans every year, as it has at times, and that great emporium of the South-West would become a puny village. Is there not an invisible hand that sways the destinies of the world? a hand that stays the devastations of plague, pestilence, and famine?

The cotton fly belongs to that numerous class of insects known to naturalists under the term of phalena or moth tribe. It resembles the butterfly tribe it many respects, but its chief point of difference is that all moths fly at night and are attracted by bright lights, and may be seen darting through the flame of a candle, during the summer and fall months, to the great annoyance of those who desire the benefit of its light. Butterflies fly only during the day.

The following are its specific characters without the technicalities made use of by the naturalist, so far as they could well be avoided:

Antennæ, or little horns projecting from the head, setaceous or terminating a point like a bristle, of a drab color, and five lines in length, being about half of the length of the body.

Wings incumbent, deflexa; under surface of thorax or breast of a dull silvery white, insensibly terminating on the abdomen and wings in a color tending to a russet; the upper surface of the wings and back

varying somewhat in different individuals, but generally of a changeable golden color with ferruginous zigzag lines traversing the surface transversely; posterior margin bordered with a narrow strip of pale pink color, with small denticulations. On the upper surface of the wings there are two black spots, one on each, about the middle of the base; legs white, the four posterior very long when compared with the front ones, which are short and slender; the tail simple. The length of this insect is about nine lines from head to tail. Expansion of the wings at the tips about the same measurement. To conclude, I will add that the shape of this moth is very much like that of an isosceles triangle, with the line forming the base inflected inwardly about two lines. This peculiar figure is produced by the exterior angle of the upper wings projecting beyond that of the interior angle.

During the present year, the time that my observations commenced for the first time, the cotton fly again made its appearance in the latter part of August, at first making but little progress, but about the middle of September their numbers increased so prodigiously that in many instances they would eat over a field of several hundred acres in four or eight days. The number of eggs deposited by the female is uncertain; they are smaller than a mustard seed, and always deposited on the under-surface of the leaf during the night, in a few days their eggs hatch. The worm, at first a minute living point, falls immediately to work to devour the leaf; its growth is rapid, for its labors cease not night nor day until it arrives at maturity, it then winds itself up into a leaf by means of a web resembling *cobweb*, casts its skin and changes into a chrysalis, in which state it remains ten days, then it bursts the thin walls of the chrysalis, and comes forth a perfect insect. In turn, it begins the work of re-production, deposits its eggs, and in ten more days it dies.

Thus in every ten days there is an additional generation, and they go on increasing *ad infinitum*. As soon as the leaves were consumed in a field this great *army* took up its march: some in search of comfortable quarters, where they might repose from their labors; others on a foraging expedition to replenish the means of their subsistence. The first took shelter in the first leaf they met with, but generally they proceeded as far as the fence, a barrier beyond which they never travelled, where they found a plentiful supply of leaves, in which they enveloped themselves. The second division extended their march much farther, sometimes travelling half a mile from the point whence they started, perishing by cart loads for want of food and the many casualties to which their journey subjected them, such as carriage wheels, heat of the sun and the rapacity of birds.

these insects called ichneumons, I may mention the *ichneumon seductor*, or dirt-dauber, well known to everybody as that wasp-like insect which builds its clay houses on the walls, and particularly in the recesses of windows to the great annoyance of the tidy housewife.

Thus is answered the question why the cotton fly did not again eat up the scant foliage which subsequently appeared on the stalks. This little usurper goes forth in search of 'whom he may devour,' and as soon as he finds a house built and well provisioned, he seizes upon it for his posterity, which he does in the following manner: when he finds a cotton worm he pierces it with the instrument with which its tail is armed, and deposits an egg; the cotton worm soon spins itself up into its case, there to await the period of its perfection, which never arrives, for soon the egg of the ichneumon hatches, and falls to devouring his helpless companion. This work of extermination continues until there is not a vestige of the cotton fly left. I venture to say, while I am now writing, (first of December,) there is not an egg, chrysalis, or fly, in the confines of the United States. My speculations on the nature and habits of the cotton fly have led me to adopt the following hypothesis: That it is a native of tropical climates, and never can pass a single winter beyond them, consequently never can become naturalized in the United States, or any where else where the cotton plant is not perennial, for nature has made no provision by which they can survive more than ten or twelve days, therefore they must perish wherever the cotton plant perishes during a period of five or six months. That wherever they have prevailed in our cotton growing regions, it is when they have become very numerous and consumed all the cotton in their native climes, and then go in search of their food in more northern climates. It is not to be presumed that this happens often, but the same remark will hold in regard to the cotton fly as it will to many other insects, that owing to some unknown cause they become exceedingly numerous, but at long and irregular intervals. The locust has already been noticed as an example, and many more might be cited. I however, will mention another to which I was an eye-witness: About eighteen years ago the *green*, or *blow-fly* became so numerous that thousands of animals perished by them, as also some human beings. The least spot of blood; the moisture of the mouth, eyes or nose, was sufficient to cause a deposit of eggs. Sick persons, particularly those who had not proper attention, suffered. Several negro children who came under my notice, fell a sacrifice to them, and it was with difficulty that many others were saved. In these instances the fly deposited the eggs within the nostrils, where they soon caused death by producing inflammation of the brain. This fly is annual, and scarcely ever deposits its eggs

on an animal, except it be the victim of a running sore; but at the period alluded to above, it appeared that there was scarcely animal flesh enough to feed the maggots of this numerous host. It is but once within my recollection, that I have witnessed this phenomenon, and neither before nor since have I heard of such ravages of the green fly. Why they should have existed in such incredible numbers at the time referred to is a question not to be easily answered.

There are three circumstances upon which I found my arguments in support of my hypothesis of the cotton fly: First. Nature has made no provision by which it could survive the winter season. Second. The irregularity of their appearance. Third. Their progress from south to north, and from west to east.

It may be remarked on proposition first, that all insects included within the genus *phalena*, hibernate in the state of a chrysalis, therefore it is utterly impossible for the cotton fly to hibernate in that manner, as they remain but ten days in chrysalis. The fly does not hibernate, for the period of their existence is but ten or twelve days. It cannot be in the state of the egg, for it is a law equally inflexible with regard to this tribe, that the egg must be deposited on the leaf on which the larvæ are to feed, and the reason is very plain, for these larvæ, when first hatched, are minute living points, of an exceedingly helpless nature, almost devoid of locomotion, or possessing it in too small a degree to enable it to go in search of its food. But let us suppose that the egg does survive the winter, how does it happen that when the worm first makes its appearance it is found on the very summits of the cotton instead of the lower branches: parts that it would reach the soonest if it proceeded from the ground upwards.

The *phalena mosi*, or silk worm, is an insect of the same genus as the cotton fly, and whose habitudes are very much the same as the latter, tropical in its nature, confining itself to a particular vegetable, the different species of mulberry, and being short lived in the chrysalis, remaining in this state but fifteen days. At the approach of winter, when the mulberry trees cast their leaves and remain leafless for many months, these insects, in our climate, would all perish, were they left to themselves. But art in this respect has triumphed over nature, for the silk grower at a certain season gathers a parcel of eggs and places them in a cold dark place until the mulberry tree shall again afford them food in the spring, and in this manner they are perpetuated, and this is the only possible way that they could be preserved here; they are like some tender exotic, which flourishes as long as the warmth of the hot house affords them a congenial atmosphere, but perishes if left to buffet the rigors of winter.

Proposition Second. Here I contend that when an insect is a native of or naturalized in any country, they are always governed by some invariable laws which determine their appearance. The grasshopper is annual, coming every spring or summer; the locust of our climate septem-decennial, appearing once in seventeen years, but the cotton fly has no regular periods of return, showing that when it reaches our climate it is by some casualty.

In proposition third, I maintain that if the cotton fly sojourned here during the winter or winters, that when it did appear at all, it would do so simultaneously through the whole cotton district, instead of which we see it progressing regularly from south to north, and from west to east.

Such are the speculations that I have entertained concerning the cotton worm, from which I conclude that it originates in South America, and reaches us through Mexico, and never can become a denizen of our soil.

Art. IX.—CALIFORNIA.

The people of the United States very naturally feel a very great interest in every thing connected with this *terra incognita*, bordering upon our territeries, and under the jurisdiction of a power with whom we are now at war. The military possession which we have taken of the country, and the important ends to be subserved by its retention or purchase, have not a little augmented this interest. In any case, we believe that the destiny of California is more nearly wrapped up in that of the republic of the north than of the central despotism which has hitherto claimed it as its own.

This territory became first known to Europeans in the romantic age of Corter, whose fleets navigated its gulf and its main stream, known as the Colorado of the west. The Jesuits peopled the country and ruled it until their overthrow left it in the hands of the Dominicans. Here it declined more rapidly than its previous progress. California resisted but feebly the arbitrary policy of Santa Anna in overthrowing the Constitution of 1824. In 1835, Mr. Forsyth offered, on the part of the American government, five millions of dollars for the country. Seven years after, Captain Jones, of our navy, seized upon its port of Monterey and raised the American flag in the mistaken belief that war had been declared between the two governments.

In a late supplement to the Philadelphia North American, a writer, from his individual observation and travels, gives many interesting particulars in relation to California, upon which we shall draw in the further progress of our remarks.

There are in upper California twenty-one missions. These have under their charge orchards of most abundant fruit, scarcely requiring any attention, such as peaches, pomegranates, plums, nectarines, oranges and apples; also vineyards of grapes in highest perfection.

There is a large commerce conducted with the Sandwich Islands, much of it in lumber. The red wood, a species of pine, grows to two hundred feet in heighth, is not hurt by worms, not easily rotted, makes excellent shingles and building materials. Another article of commerce is soap, it is of inferior quality, made with facility at little cost, and yields a very considerable profit. Wild and uncultivated cotton is found in the country; the Indians have it worked into blankets. The bushes are six to nine feet high. The pasturage for sheep, and the facilities of wool raising are unrivalled. The products of the water are salmon and salmon trout. The whale is killed in the very harbor of Monterey, and the seal and sea otter are not rare. Deer course the woods in great numbers. Elk are found in the San Joaquin Valley, and are taken with the lasso; the hide is used for leather, and the tallow for soap. The grissly bear, too, makes its unwelcome visits.

Horses exist in any quantity, wild. They have been slayed by hundreds to make use of their pastures for smaller cattle. It is said that Capt. Smith, of St. Louis, bought several hundred of them in 1827, at an average price of nine dollars, and that mares have been bought as low as fifty cents each. As many as forty thousand wild horses and mares have been seen at a time on the Tularer plains. In consequence of the scattered condition of inhabitants, horses are indispensable in California.

"All parts of California" says the correspondent of the North American "are not alike equal in fertility of soil. To the southward of San Luis Obispo the farmers consider they have a good crop of wheat if they gather thirty bushels for one of seed. Beans, corn, peas, melons, pumpkins, etc., etc., yield well all over California, but the most fertile land is from San Luis Obispo to the northward.

"I have mentioned the above as an example, that people may be on their guard, because I have already seen some of the persons who came over in the last emigration, who stated to me that they had been persons well to do, and that nothing in the world had tempted them to sell off their property and emigrate to California but the reading of a small

book published by an American who had visited California, and that they had been most egregiously disappointed. That the fertility of the soil in most parts of California is most extraordinarily rich, no person can deny, or that its variety of soil and climate, which last is in all parts excellent, will enable it to produce an innumerable variety of vegetation is likewise not to denied, but as I wish to represent things as they really are, and as I have no interest whatever in deceiving any one, I shall contradict such absurdities whenever I fall in with them."

"I shall now," the writer continues, "give you an account with the descriptions of the principal classes of timber in California, beginning with the red pine tree. This tree commonly grows from two hundred and fifty to three hundred feet high. I have measured one when felled that was three hundred and twenty-seven feet from the butt to the point or head; this was by no means an uncommon size tree, being but nine feet in diameter where it was cut off, and the largest ever I saw measured while standing was forty-two feet in circumference. I have heard of much larger ones, but never saw one; these trees all run very regular in their dimensions from the bottom to the top. The heart of a young tree begins to turn red at about six years old, the outside from two to three inches in thickness, always remaining white; the bark is stringy and difficult to cut through, even with the sharpest axe; it may well be compared to the husk of the cocoa nut. The leaf and burr are very similar to those of the spruce tree; and I have seen several trees felled in the spring of the year which have discharged as much as a barrel of water the moment the axe has struck the heart of them.

"The timber which this tree produces is invaluable for its durability, the worm does not enter it after it has been put to use, though while the tree is standing there is a worm which is very injurious to it, always entering at the bottom of the branches where the knot is almost equal to a flint stone, and always eats upwards, so that the tree is very often found to be sound and good as high up as the first branch, and above that is sometimes found greatly injured by the worm, but whenever this tree is cut down and dried this worm dies, and no other insect ever enters the wood, and if it is properly seasoned before being put to use, I cannot say if ever it rots at all, unless it is put in some place in the ground where it is exposed to the wet and dry seasons alternately, and even then it lasts an immense length of time.

"Several of the old houses in the mission of San Carlos were pulled down this year for the purpose of getting the timber they contained, and which was red wood, and the beams and lintels were as sound to all appearance, as the day they were put into these houses, which must have been some sixty or seventy years ago, and yet by driving the plane once over them, they showed as beautiful and bright a red as the day they were cut down.

"For shingles this timber has not its equal, either for the ease with which it is worked, or for its durability. I have seen a man make by hand, that is to say split, shave and joint, fifteen hundred a day for two months at a time.

"This tree is fond of hilly ground; it is seldom found on level places, but in valleys and on the sides and tops of mountains, it grows in im-

mense groves, and the great demand there is for it in both this country and at the Sandwich Islands, proves the superiority of it to all other kinds of timber on the shores of the north Pacific Ocean. I have called it the red pine because I have heard many disputes amongst botanists as to its proper name, and it appears to me to resemble some species of pine nearer than anything else.

"From ten leagues to the southward of Monterey up to forty degrees north latitude, Caltfornia abounds with the red wood tree, and the exportation market has increased to such a degree that at the present day a board of this species of wood cannot be bought in Monterey at any price, and several buildings have been stopped this year for want of this class of timber. Since July last, there have been no less than five ships in Monterey looking for a cargo of red wood boards, joists, or shingles, and none of them were able to procure as much as they required, merely for the want of laborers or capitalists who could turn their attention to this branch of commerce and industry.

"Monterey is half surrounded by groves of pines which extend in some places about ten miles back, in others two or three. These are of an excellent quality for ship masts and yards, when cut in the proper season; they are principally a sort of white pine, very tough, and run generally from thirty to one hundred and ten feet high, and from one to four feet in diameter, seldom exceeding the latter; the timber makes excellent flooring, but must be cut in the winter, and must be well seasoned before being used. Across the bay, at Santa Cruz, and to the northward, there are immense quantities of yellow pine. Samples of the red and white and yellow pine were last year taken to the Marquesas Islands by the French missionary ship Lyon.

"There are likewise several kinds of oak in California; the large black oak tree is very plentiful, though the trunks of none of them grow very high, yet there are some few places where the trunk of these trees grow as high as fifty feet clear of branches, but the common growth of them is from fifteen to thirty feet, seldom exceeding the latter clear of branches.

"About twelve miles to the southward of Monterey is a large cypress grove; this is another very valuable class of timber, both for its beautiful clear grain, and for its durability. This tree does not grow large here; they run commonly not over seventy or eighty feet high, and at about twenty-five or at most thirty feet from the ground, they begin to branch out, consequently the timber above that height is unserviceable.

"Button-wood, willow, poplar, alder, cotton-wood, and black and white ash, are very abundant all over the country, and some of these grow to an immense size, but are very little used except for fencing or building wooden huts in the roughest style. There is likewise a species of shrub oak growing in this country very abundantly, but I know of no other use it can be put to but fire wood, and for this purpose it is excellent, though many people say the bark is very excellent for tanning. The tree scarcely ever grows eight feet straight up; it generally begins to grow crooked from its very root; sometimes vessels use it to make knees, but I do not believe it is durable, and the maggot generally gets into it the first year after it is cut down.

"On the borders of the Sacramento river and in the Sacramento valley, besides the different species of timber already mentioned, will be found the walnut, hickory, maple, and several other kinds of timber. In short, if California were as well watered (though this is not scarce,) as it is wooded, it would surpass every country in the known world."

The population of California is mixed aborigines, Spanish, and foreign, and does not exceed in all thirty or forty thousand. The fur traders from the United States are scattered every where in this territory, especially about the shores of the Colorado.

The soil in general, especially in the vicinities of the Pacific, is sterile. Rains scarcely ever prevail, and for years hardly a shower is known. Fertile spots exist on the Colorado, but the region has not been much explored. The vicinities of St. Francisco Bay, and St. Bernard are exceptions, and exhibit great fruitfulness. There are no rich veins of gold in the interior, and the pearl divers on the Gulf find rare and precious varieties of that beautiful and valued commodity.

Art. X.—TESTAMENTS UNDER THE CIVIL LAW ADVERSE TO THE RIGHTS OF HEIRS.

Manumission of Slaves.

Madrid, April 17, 1847.

J. D. B. De Bow, Esq.,—

My Dear Sir:—You do me the honor of requesting a contribution to your valuable Review, and I accordingly now transmit you for publication, if suitable for your journal, an opinion which I prepared with care and after much investigation, for the counsel in the Randolph will case, who were engaged to sustain the will of the late John Randolph, of Roanoke, manumitting his slaves. I trust the subject may be of interest to Louisiana jurists, and induce your readers to pardon any defects they may discover in a production which it is but just to myself to add, was not prepared originally with any design for publication, and is now submitted to you with but a verbal alteration here and there.

I am, dear Sir, very truly yours,

THOMAS CAUTE REYNOLDS.*

* Mr. Reynolds has received the honorable appointment of Secretary to the legation of the United States at the Court of Madrid, and is engaged in the prosecution of those studies in which at comparatively an early age he has won high and deserved honor. He is a citizen of South Carolina, and received the advantages of legal education in the best institutions on the continent. His *thesis* was published some years ago on the *Origin of the Trial by Jury*, in the Latin tongue, with German notes, and was highly commended by the late U. S. Attorney General, Hugh S. Legare. It affords us pleasure to furnish anything from the pen of our former fellow-citizen, and to announce that he has been lately appointed by the State of Louisiana to search the records of Madrid and Seville for its early documentary history. In relation to the duty, Mr. Reynolds thus remarks: "The archives of Spain are at Simaneas, near Seville; those of the Indies, which comprise the chief part probably of all the Louisiana archives, are at Seville. The latter I have seen, and they are admirably arranged; of course I saw only the outside of the bundles."

I AM requested to give a statement of the doctrines of the civil law concerning the extent to which dispositions of a will injurious to the heirs at law affect its validity, and particularly the presumption of insanity in the testator, which may be raised by such dispositions.

This I can best do by stating the rules of the civil law which relate to the *querela inofficioso testamenti*, or as it is more concisely termed, *querela inofficiosi*. As the provisions in reference to slaves are but incidentally alluded to in most modern works on the civil law, I have had to seek for the greater portion of the information which the subjoined opinion concerning them required, in the *corpus juris civilis* itself, in the Titula relating to *Testamenta Inofficiosa* and kindred subjects, I have for the same reason been very particular in copying the authorities, *literatim et verbatim*, and *fully*, that it may be seen that I have not stated the doctrines on the subject imperfectly or partially. As there are no *overruled cases* in Justinian's Code, all the passages cited from it may be relied on as *law*. Where I have quoted modern authority, it has been that of Heineccius, whose name in the civil law is equalled in weight by but very few.

QUERELA INOFFICIOSI.

By the laws of the XII. Tables, every Roman citizen was allowed to dispose of his property, by will, in any manner that he chose, without regard to the claims of his heirs at law. But some cases of very gross injustice having occurred,[1] the Prætor, or Roman Chancellor, about the period of Cæsar's wars in Gaul, was induced, in a few cases, to interfere. The heir at law made to him, in his Centumviral Court, a complaint that the will was contrary to reason and duty, (*officium pietatis*, and alleged that the testator was insane when he made it. On this complaint (*querela inofficiosi testamenti*,) the court taking the will itself as conclusive proof of such insanity, (which, however the Roman jurists[2] expressly state was not considered by them to be proof of insanity *in fact*, but only an equitable fiction on which to ground the decision,) set aside the will and gave the estate to the heirs at law.

An outrageous case having occurred, that of a father who bequeathed his immense estate to a mean person, leaving his infant child entirely destitute, (vide Val. Max. VII. 7, 3,) Augustus moved, as some suppose* by these circumstances, caused the famous *Falcedian law* to be passed thirty-eight years before the birth of Christ. It ordained that Roman citizens should be permitted, as heretofore, to dispose of their estates

1 Some are to be found in Valerius Maximus, vii. 7.

2. Justiniani Instit. (II. 18) de inofficioso, (primordio:) "non quasi *vere* furiosus sit, sed *recte* quidem fecerit testamentum, non autem ex officioso pietatis. Nam si *vere* furiosus sit, *nullum* testamentum est."

* Heinneccii Antiq. p. 443, nota *b*.

by will to whomsoever they chose, provided one-fourth remained[3] to the heir or heirs at law, (*heres heredesve:* not the heirs at law, but the heir named in the will; in our law the *executor and residuary legatee,*) in order that the estate might not be burthened with legacies as to leave him nothing for his trouble, (and the expense of keeping up the costly *sacra privata* offering to the *manes* of the deceased, etc.[4]) This law underwent several modifications, and was at last virtually abrogated by Justinian.[5]

Separate from this was the *querela inofficiosi testamenti*, which was a complaint by the heir at law (*heres ab intestato*) that the testator had, in a state of insanity, left him either nothing at all or less than he was in duty (*ex officio pietatis*) bound to leave him. In determining when a testament should be annulled as *inofficiosum*, or *undutiful*, the courts were guided by the *analogy* of the Falcidian law, and when the heir at law was left by the testator at least one-fourth as much as he would have received had no will been made, they would not entertain the *querela inofficiosi testamenti*, but sustained the will,[6] though at first they seemed to have been guided by the particular circumstances of each case, and not to have made this particular proportion the invariable test.

3. Caput secundum of the Lex Falcidia, contained in *b.* 1 Digestorum, ad L. Falcidiam (xxxv. 2) is as follows: "Quicumque civis Romanus, post hanc legem rogatam, testamentum faciet, is quantum cuique civi Romano pecuniam jure publico dare, legare volet, jus potestasque esto: dum ita detur legatum, ne minus, quam partem quartam hereditatis eo testamento heredes capiant, etc."

4. Heineccii Antiquitates Jur. Rom. lib. II. Tit. 20–22: (Instit. Justiniani,) § 18. "Ea [lex Falcidia] enim *non permittet* heredi, quadrante *accepto*, hereditatem repudiare, sed testatorem obstringit, ut quartam, heredi salvam relinquat, idque si non fecerit, herede potestatem facit, tantum *detrahendi legatariis*, quantam desit quartæ sumæ." See also the same work, eodem loco, § 15.

5. Heineccii id. op. loco cod. § 20: "Verum Legis Falcidiæ vires maxime elisit Justinianus, permissa facultate testatoribus utiliter prohibendi Falcidiæ detractionem, quum antea hujuscemodi voluntati, quantumvis expressæ, heredes minima parere cogerentur." I presume Heineccius refers to this clause, "Quodsi expresse, etc.," in § 2, cap. II. Justiniani Constitut. *Novell.* I. de heredibus et lege Falcidia.

6. Heineccii id. opus, Liber II. Tit. 17–19, (Justinian Instit.) §7. "Ceterum cessabat querela, relicta legitima, seu certa et legibus definita bonorum portione. Ea olim semper erat hereditatis *quadrans*: L. 8, § 6 et 8, *Dig.* de Inoff. test., L. 2. *Cuicis* de Inoff. donat. * * * * nec non post hos Ant. Schult. ingius *Jurisp. Ante just.*, p. 381, docuerunt, legitimam illam portionem ex legis Falcidiæ *rationibus* prudentem interpretatione esse *inductam*. Sani heredibus, quibus inofficiosi querela competit, QUARTAM FALCIDIAM deberi, disertis verbis dicunt Paulus, *Sententt. Recepti* IV. 5. 5. et Ulpianus *L.* 8, § 9 *et* 14, *Dig. de Inoff. testam.* Absolute quoque illam portionem QUARTAM vocat Plinius *Epistt. V.* 1. et FACIDIAM Justinianus, *L.* 31, *Cod. de Inoff. test.* "The opinion of the courts (*doctrina prudentum*) seems only gradually to have thus fixed itself: for Ulpian, in stating that the gift of the *Quarta "mortis causa,"* would exclude the *querela in test.*, modestly says "*puto*," (*l.* 8, § 6, D. de *Inoff. test.*), while the emperors Valerian and Gallienus speak, in a constitution of A. D. 256, (*l.* 2, *Cod. de Inoff. donat.*) of "quarta pars debitæ ab intestato portionis," and Justinian, A. D. 528, (*l.* 31, *Cod. de Inoff. test.*) still more distinctly says, "legitimæ portioni, *id est*, quartæ parti scilicet ab intestato successioni."

Who were entitled to this relief?

At first this point does not seem to have been very definitely settled, and the Prætor, or Chancellor, was often disturbed by applications for it on the part of distant relatives of the testator; for Ulpian quaintly advises all heirs at law beyond the degree of brother, not to put themselves to the useless expense of making this querela, as they could not obtain a decree in their favour. It was soon confined to brothers (and sisters) and nearer relatives in the ascending or descending line, (Note 7.) But Constantine the Great, in the year of Christ 319, prohibited altogether the granting of it to uterine (or half) brothers and sisters, or to full brothers and sisters unless the persons named as heirs in the will was a reputable character in the eye of the law.[8]

The heir at law making this complaint must also not have rendered himself unworthy of the bounty of the testator. What acts should be deemed sufficient to render him such, it was left to the opinion of the court to decide according to the circumstances of each particular case, until Justinian (*Novella* 115) specifically enumerated them and ordained that no others, except those so mentioned by him, should furnish a sufficient excuse to the testator for diminishing the portion the heir at law was entitled to, or entirely disinheriting him; These acts are all of a highly criminal or disgraceful nature, such as attempting the life of the testator, turning informer against him in cases in which the crime was punished by death, associating with sorcerors, becoming a public gladiator, heretic, etc.

An important practical question was, how was this fourth (*Quarta Falcida, portio legitima*) to be calculated?

1. The slaves whom he manumitted were excluded from the valuation.[9]

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7. *Lex* 1. *Dig.* (V. 2) *de Inoff. test.* says: "*Ulpianus, libro xix. ad Edictum.* Secundum est frequentes esse inofficiosi querelas; omnibus enim tam parentibus quam liberis de inofficioso licet disputare. Cognati enim proprii, qui sunt ultra fratrem, melius facerunt, si se sumptibus inanibus non vexarent, quum obtinendi spem non habeant."

8. *Lex.* 27 *Cod. de inoff. test.* "Fratres vel sorores uterini ab inofficiosi actione contra testamentum fratris vel sororis *penitus arceantur: consanguinei* autem, durante agnatione vel non, contra testamentum fratris sui vel sororis de inofficiosi quæstionem movere possunt, si scripti heredes [*the heirs in the will*] infamiæ, vel turpitudinis, vel levis notæ macula adspergantur, vel liberti, qui perperam et non bene merente, maximisque beneficiis suum patronum assecuti, instituti sunt, excepto servo necessario herede instituto." *Necessarius heres* in a slave whom an insolvent testator appoints his heir—so called because he cannot refuse to take the estate, but is, ipso facto, heres.

9. Justinian. Inst. (I. 7) de Legi Fusia Caninia tollenda. "Legi Fusia Caninia certus modus constitutus erat in servis testamento manumittendis. Quum quasi libertates impedientem et quodammodo invidiam, tollendam esse censuimus, quum satis fuerat in humanum, vivos quidem licentiam habere, totam suam familiam [*slaves*]

2. His debts and funeral expenses were to be paid.

So great indeed was the favour with which the civil law regarded these manumissions, that it upheld them, though the estate was insufficient to pay the debts, provided only that the manumittor did not *design* thereby to *defraud* his creditors.

The course of proceeding would hence be this:—

1. The debts and funeral expenses should be paid and the slaves manumitted whom the testator had directed to be freed.

2. The remainder of the estate would be valued, and if the heir or heirs at law, being related to the testator in the ascending or descending line, found that the portion bequeathed to him or them was less than one-fourth of the share he or they would be entitled to, (of the

libertate donare, nisi alia causa impediat libertatem, morientibus autem hujusmodi licentiam adimere." This *Lex Fusia Caninia* (passed two years B. C.) established the proportion (*modus*) of his slaves which the testator should be permitted to free, and in no case was the number manumitted to exceed one hundred. A *Lex Ælia Sentia* was passed A. D. 3, which laid numerous restrictions on the manumission of slaves by their masters *inter vivos*. It prohibitted especially manumission *in fraudem creditorum*. Yet this rule prevailed *in favorem libertatis*: "Prævaluisse tamen videtur, nisi *animum* quoque *fraudandi* manumissor habuerit, non impediri libertatem, *quamvis bona ejus creditoribus non sufficiant*." (J. Qui et quibus ex causis manumittere, etc. § 3.)

With this leaning of the Roman law and of the courts which administrated it, it is not surprising that the rule soon prevailed that manumitted slaves did not come under the provisions of the Falcedian Law, and consequently that the diminution of the portion of the heir at law by their manumission was not a good foundation for the *Querela Inofficiosi*. Accordingly we find Ulpian, in *l.* 8, *Dig. de inofficioso testamento*, expressly saying: § 9 "Quarta autem accipietur scilicet deducto aere alieno et funeris impensa. Sed an et libertis quartam minuant? videndum est, et numquid minuant? Nam si, quum quis ex asse heres [*sole heir*] institutus est, ideo non potest dicere inofficiosum, quia habet Falcidiam, Falcidia autem libertatis non minuit, potest dici, *deductis libertatibus* quartam inesse. *Quum igitur placet, quartam minui per libertates*, eveniet, ut, qui servos *tantum* habet in patrimonio suo, *dando iis libertatem* inofficiosi querelam EXCLUDAT, etc." Justinian says, (Inst. de Legi Falcidia:) "Quum autem ratio legis Falcidiæ ponitur, ante deducitur aes alienum, item funeris impensa, et *pretia servorum manumissorum;* tunc deinde in reliquo ita ratio habetur, ut, etc." The same rule is laid down in l. 39 D. de Legi Falcidia, in ll. 33, 34, 35, D. eod., in l. 1, § 11, 12, D. *Si qui plus*, in several ll. D. de manumissis testamento: D. de fidei commissariis libertatibus, etc. By *analogy* to this interpretation of the *Falcidian* law, it would necessarily be determined that in ascertaining the *portio legitima* (*quarta*), the denial of which would entitle a party to the *querela inofficiosi*, the *pretia servorum manumissorum* must, as well as the debts and funeral expenses, be first deducted, in order to arrive at the amount one-fourth of which constituted the *legitima portio*. We accordingly find Ulpian affirming this principle in the passage quoted above, and Paulus, the highest authority known to the Justinian Code, (a very large portion of the digests being taken from his works), in his Receptæ Sententiæ. Lib. iv. tit. 5, de inofficiosi querela, places it beyond a doubt: he says. § 5: "Filius exasce heres institutus inofficiosi dicere non potest: *nec non interest exhausta nec ne sit hereditas:* cum apud eum quarta aut legis Falcidiæ aut senatus-consulti Pergasiani beneficio sit remansura. § 6. Quartæ portionis portio liberis, deducto aere alieno at funeris impensa, præstanda est, ut ab inofficiosi querela excludantur. *Libertatis quoque eam portionem minuere placet.*" As the [Pauli Recepti. Sententt.] Interpretatione Visigothica has it: "de asse hereditatis primo loco defuncti debita detrahuntur, et expensa quæ in funere ejus est præstita: *sed et collatæ licertates nihilominus debebuntur.*"

estate *minus* the liberated slaves, debts, etc.,) had no will been made, or he or they been made *heres heredesve exasse*, (*i. e.*, of the estate unincumbered by legacies), he or they, or any of them, could renounce the will and apply to the prætor to rescind it, as inofficiosum, alledging that the testator was insane when he made it. But though the estate were even entirely exhausted by manumissions, the heir could not complain: the contrary when it was diminished or exhausted by legacies.

3. Brothers and sisters receiving under a will less than the one-fourth above defined, could complain and have it set aside (they, of course, being the next of kin) *only* when a base and disreputable person was made the recipient of the portion to which they would be entitled had no will been made.

4. Uterine brothers and sisters, and all more distant collateral relatives, and all relatives who had rendered themselves unworthy of the bounty of the testator, were entirely excluded from the benefit of this querela, *whatever* might be the provisions of the will.

Remarks.

It is to be noted that,—

1. The *presumption* of insanity raised by an inofficious testament, was a mere equitable fiction: unless the heir made his *querela* within five years, the will was good, while a will made by a man really insane was *null* and never could become valid. Consequently, in a system of law in which no such fiction has been established, a testament deemed by *Roman* law inofficiosum, cannot, even by any reasoning *drawn from* the Roman law, be deemed presumptive evidence of *real* insanity: and indeed the Roman law expressly declares that it is not.

2. Even this fictitious presumption could not be raised, when the heir was deprived of his (otherwise) legitima portio, by the manumission of slaves, even to the entire extent of the estate and though the testator thereby cut off his own deserving children. As the Roman law considered this disposition of his estate by the testator to rebut the presumption which it in other cases particularly cherished, it must have held such a will to be, if I may use so quaint an expression, an *especially sane* one, and if any presumption at all is to be drawn from the reasoning of the Roman law with regard to such a will, it must be one in *favour* of the *sanity* of the testator.

3. Brothers and sisters of the full blood could object to their share (suppose a cherished family seat, for instance,) being given to infamous persons, while uterine brothers and sisters, and more distant collaterals could not complain though even a common felon were made heir in

their place. Hence the exclusion of relatives in those degrees is not only not presumptive evidence of insanity, but, as the Roman law bid the presumption, which it raised in other cases, here cease, rather according to the reasoning of that law, a quasi presumptive evidence of sanity.

When, in addition, the estate is diverted from relatives in those degrees for the purpose of manumitting slaves, the presumption of sanity is strengthened, for the Roman law considered, as I have before in substance said, such a will to be of *itself* so sane as to destroy the presumption of insanity which was feigned to sustain the *querela inofficiosi*—it contained on its face, so to say, so strong a presumption of sanity, that the fiction on which the querela was based, had to yied to it.

Art. XI.—ANALYSIS OF TEXAS SUGAR SOILS, ETC.

Modes of Analysis, Tests of Soil, etc.

New Orleans, June 4, 1447.

J. D. B. De Bow, Esq.,—

Dear Sir:—In reply to your note of the 5th ult., accompanying three specimens of soil from the plantation of Gen. Hamilton, in Brazoria county, Texas, I stated that in consequence of so much of my time being occupied in official duties, it would be impossible for me to make a complete and careful analysis, but that I would make such a partial examination as would enable you to form a tolerably correct general opinion of the soil.

Sir Humphrey Davy says:

"It is of importance that the specific gravity of a soil be known, as it affords an indication of the quantity of animal and vegetable matter that it contains; these substances being always most abundant in the lighter soils." (See Brande Chemistry.)

I found the specific gravity of the Cane soil, No. 1, to be 2.235, of the Peach soil, No. 2, to be 2.110, and of the Elm soil, No. 3, to be 2.190. According to Sir H. Davy's rule, No. 2 should contain most organized matter; and No. 3 more than No. 1.

The next indication of the fertility of a soil is taken from the quantity of Hygrometric water which it contains. On this subject Davy observes:

"The loss of weight in the process should be carefully noticed, and when in 400 grains of soil it reaches as high as 50, the soil may be considered as in the greatest

degree absorbent and retentive of water, and will generally be found to contain much vegetable or animal matter, or a large proportion of aluminous earth. When the loss is only from 20 to 10, the land may be considered as only slightly absorbent and retentive, and siliceous earth probably forms the greatest part of it." (Vide Brande.)

The Hygrometric water contained in the soil No. 1 amounts to 5 per cent, or 20 grains in 400 grains of soil; it is the same in No. 2: and in No. 3 it amounts to 10 per cent, or 40 grains in the 400 grains of soil. From this I should infer, if Sir H. Davy is correct in his remarks, that Nos. 1 and 2 are drowthy soils, requiring a great deal of rain to produce fine crops, while No. 3 would require much less. I am confirmed in this opinion by the simple experiment of saturating a portion of each soil with distilled water, which is suffered to evaporate in the open air in common glass tumblers. The three varieties, on becoming dry, cracked and finally separated into distinct masses.

Pursuing the subject regularly, the next thing that claims attention is the per centage of organised matter. No. 1 contains 11.5 per cent, or 46 grains in 400 grains of the soil; No. 2 contains 7.895 per cent, or 31.5 grains in 400 grains of soil; and No. 3, 6.75 per cent, or 27 grains in 400. I have not had time to compare these satisfactorily with the results obtained from other soils.

Sir H. Davy speaks of a good turnip soil in Norfolk (Eng.) which contained of vegetable and saline matter but 5 per cent; of another soil in Sussex, remarkable for producing flourishing oaks, which gave but 4 per cent of vegetable decomposing matter; and of an excellent wheat soil in Middlesex, which yielded 11 per cent of animal or vegetable matter and moisture. Speaking of "a good silicious sandy soil from a hop garden near Tunbridge, Kent," he observes "400 grains of soil yielded 19 grains of water of absorption, which must be the same thing as hygrometric water, and 15 grains of matter destructible by heat, principally vegetable, which probably includes all the organised matter."

In the American Journal of Science and Arts, vol. XL, No. 1, January, 1841, page 191, there is an analysis of the soil of the Nile by Dr. Jackson and B. Siliman, Jr., in which the per centage of vegetable matter is set down as 6.90. And in the analysis of the soil of the Mississippi, conducted by Professor Riddell and Mr. Chandler in the spring and summer of 1846, the organic matter amounts to only 3.10 per cent.

Organised matter is certainly one of the elements of fertility in soil, and in this respect the specimens from Texas will compare favorably with the most fertile soils in the world.

On treating the burnt soils, after the expulsion of the organised mat-

ter, with distilled water and a few drops of Muriatic acid, effervescence was clearly perceptible in the cane soil No. 1. This was anticipated, as fragments of small shells of the genus Aelix, but too much broken up to allow the variety to be detected, abound in that soil. In the other specimens there was no appearance of effervescence.

Muriatic acid was then added to each vessel containing soil; after boiling a sufficient time to allow the acid to take up all the ingredients accessory to the nourishment and growth of plants, and washing, filtering and drying the residium, the loss of No. 1 was found to be 10 per cent, No. 2, 8.5, and No. 3, 15 per cent; the insoluble residue consists of silicates not yet examined; the quantity of iron may probably be between 5 and 8 per cent, though it is evident that most will be found in No. 3. I may hereafter complete the analysis, should I have sufficient leisure.

From the foregoing experiments it is inferred, that in all three specimens of soil, clay predominates over sand, in the form of silicate of alumina. There is most clay in No. 3, and least in No. 2.

All these soils require a great deal of rain to produce full crops. No. 3 containing the most Hygrometic water, probably requires less than the other two. With sufficient rain and proper management, they may be considered as fertile, durable, and valuable soils.

Respectfully, your ob't sv't,

WM. P. HORT, M. D.

N. B.—THE SPECIFIC GRAVITY OF A SOIL IS THE RELATION OF ITS WEIGHT TO THAT OF WATER.

Sir H. Davy's rule is "to introduce into a phial which will contain a known quantity of water, equal volumes of water and soil; and this is easily done by pouring in water until it is half full, and then adding the soil till the fluid rises to the mouth; the difference between the weight of the soil and that of the water will give the result."

The rule I adopted was one devised by Professor Riddell. It is as follows:

a=weight of a phial full of pure water.
b=weight of soil,
c=weight of the same phial, containing the soil and then filled to the mouth with water.
Required x the specific gravity of the soil.

$$1 = \text{vol. water} : \frac{1}{\text{vol. soil}} :: 1 : x.$$

$$\frac{1}{\text{vol. soil}} = x.$$

$\frac{1}{x}$ = vol. of the soil, water being 1.

$\frac{b}{x}$ = actual volume of the soil.

So $\frac{b}{x}$ = weight of water of volume $\frac{b}{x}$

b = weight of soil of do. $\frac{b}{x}$

$$b - \frac{b}{x} = c - a$$

$$\frac{b}{x} - b = c\,x - a\,x$$

$$b\,x + a\,x - c\,x = b$$

$$x = \frac{b}{a + b - c} = \text{specific gravity of soil required.}$$

Actual weights—

a = 627.5, then 627.5 + 200 — 738 = 89.5, and

b = 200

c = 738 200 ÷ 89.5 = 2.235 specific gravity.

The hygrometric water may be called the water of absorption, which no heat of the sun can separate from the soil. An artificial heat, therefore, must be used. The soil, after being pulverised and weighed, is placed in a silver dish on a sand bath previously heated to 300° Fahr. In about an hour the water will be evaporated, and the loss of weight in the soil indicates the quantity of hygrometric water.

To ascertain the amount of organized matter, including animal and vegetable matter, I introduced the dry soil, placed in a plantinum crucible, in the muffle of an assay oven, and gradually heated it until a red heat pervaded the whole mass of the soil. This degree of heat is estimated by some of the French assayers as high as 30° of Wedgewood's pyrometer. The weight of the soil when cool will show the loss sustained by burning, which loss is the amount of organised matter in the soil.

The remaining parts of the analysis having been sufficiently explained, I have only to say that it will readily occur to you that the effervescence spoken of, indicated some carbonate, but having seen the fragments of shells, we are certain that it was carbonate of lime.

There are other circumstances with which chemistry has nothing to do, which are of great importance in determining the fertility and durability of a soil. 1st. The depth of the soil; 2nd. The foundation or stratum on which it rests, and, 3rd. The size and description of trees which grow upon it. In a practical point of view, so far as the fertility

of the soil is considered, these natural indications throw as much light on the subject to an experienced planter, as chemical analysis, but in manuring, the importance of chemistry is easily understood. Analysis determines which of the component parts of the soil contributes most to the nourishment of the peculiar crop planted on it; and knowing in what respect the soil is exhausted, the enlightened planter will know how to restore and preserve its fertility. Knowledge on this subject will ere long become very accurate, for chemists are vigorously pushing their researches, and analysing every portion of the plants cultivated by man for necessary or useful purposes.*

Art. XII.—DIRECT TRADE OF SOUTHERN STATES WITH EUROPE.

This subject is once again receiving attention, and is, we hope, not destined to another deep and protracted sleep. If the South is to have her due weight in the commercial movements of the world, and not to play a *subordinate* part, she will no longer delay action.

New Orleans, Mobile, Charleston, Savannah, and Richmond may not be the entrepots of *domestic* and coastwise trade alone. It is possible for them to be the rivals of New York, Boston, Philadelphia, and Baltimore on the seas.

New Orleans is already reaching for a line of steamers to Europe. Is there another point more important for these steamers? Has Europe a nearer affinity with any other portion of the United States than with the great mart that supplies so much of the clothing and the bread for her working millions; and will we stop with a line of steamers?

"The exports last year," said Lieutenant Maury in 1845 to the Memphis Convention, "from the single port of New Orleans, were $54,000,000; from the whole country, $100,000,000. The value of the duty paying imports for the same year, was, according to official return, $84,000,000; and the duties collected on them, $29,000,000. In simple fractions, the average rate of duty is over one-third the value of the goods. Against these $54,000,000 of exports, New Orleans imported goods enough to yield a revenue of only $1,600,000 to the customs. According to the above rates, the value of these goods was therefore $4,800,000. Now, supposing these imported goods to be as bulky as the raw material sent out from New Orleans, (which is by no means the case,) it appears that ten vessels out of every eleven that came across the sea, for this Southern produce, came empty, and therefore this produce had to pay the freight both ways. It is true that some vessels came with cargoes from New York and Boston, and brought dry goods, furniture and coffins, but this only shows that as far as the foreign merchandise was concerned, New York, Boston, &c., did the importing for New Orleans."

* For a complete analysis of the soil of the Mississippi delta, the reader is referred to Commercial Review, December, 1846.—Editor.

We were turning over a package of old and valuable documents that had been stored away in our library, a few days since, when it chanced that several pamphlets embracing the proceedings of Southern and Western merchants on the subject of this trade and commerce, came to light. We turned over their pages with great interest, and marvelled that a movement begun in such a spirit and prosecuted for a time with so much vigor, could at last have been suffered to die away and pass as it were from memory. Where are the men that instituted the Conventions of Augusta, of Charleston, and of Macon? Where are those delegates from the Carolinas, and Georgia, Alabama and Tennessee, Florida and Mississippi, whose enterprize appeared to have no bounds? It is scarcely ten years since then. Has everything been achieved that was desired, or has despair seized upon them to deaden and destroy their energies. We would recall those scenes and times. We would bring upon the stage again the actors and the events. Perchance the day will come—a better and a brighter one for the South, for which they sighed.

The last of these conventions was, we believe, held in 1839. There were present from South Carolina, 170 delegates, from North Carolina, 3; from Georgia, 33; from Alabama, 5; from Tennessee, 5; from Florida, 3; Mississippi, and Louisiana, were not represented.

Among the resolutions adopted were the following:—

"*Resolved*, 1. That the commercial capital and credit of the Southern and South-Western States should be so extended and enlarged, as to enable our merchants to carry on the business of direct importations on an extensive scale, and on the most advantageous terms.

Resolved, 2. That for this purpose, it is highly important that a portion of the capital now absorbed in other pursuits, should be directed to commerce, for which the strongest inducements are now offered by the passage of laws in several of the States, authorizing the formation of limited co-partnerships, and from the reasonable assurance that such investments will be as profitable to individuals as they must be beneficial to the community.

"*Resolved*, 3. That our Banks should extend all the aid in their power to this trade, and afford the necessary facilities for carrying it on successfully, by enlarging the capital and extending the credit of those who may engage in it, to the utmost extent consistent with the safety of these institutions and the public welfare.

"*Resolved*, 4. That the proper efforts should also be made to bring in foreign capital and credit, in aid of the resources of own country, and that for this purpose suitable agents should be sent abroad to induce foreign capitalists and merchants to establish agencies and form co-partnerships in our cities, with the assurance of their receiving a cordial welcome and zealous support.

"*Resolved*, 5. That similar efforts should be made to bring about a co-operation between our merchants and capitalists, and those of Europe, for the purpose of immediately establishing lines of packet ships and steamers, whereby regular communications, at stated periods, may be secured—and that all other proper measures should be adopted to effect as speedily as possible, this all important object.

"*Resolved*, 6. That in the opinion of this Convention, it is essential to the success of any scheme of direct importation, that a demand should be created in our own ports for all the goods so imported, which can only be effected by opening free communications with the interior by an extensive system of railroads, canals, and turnpikes, by which the merchants of the interior may be enabled to lay in their supplies on better terms than they could procure them from any other quarter.

"*Resolved*, 7. That among the measures auxiliary to the important objects we have in view, this Convention cannot but regard as of deep interest and importance, the adoption of the proper means for introducing COMMERCIAL EDUCATION among the youth of our country—the training them up to habits of business and thereby establishing a body of merchants, whose every interest and feeling shall be identified with the country which has reared and sustained them."

"*Resolved*, 8." This resolution applied to the revival of the old "*Southern Review*," of the palmy days of Southern literature, the objects of which were the defence of our institutions and the *developement of the resources* of the slaveholding States.

A committee of twenty-one, of which the venerable and distinguished Chancellor Harper was chairman, and of which the following individuals were members, prepared the report. To our citizens as deserving of preservation and extended circulation, we shall present it in another number of the Review.

COMMITTEE.

William Harper, Robert Y. Hayne, G. A. Trenholm, J. K, Douglass, F. H. Elmore; C. G. Memmenger, A. Blanding, *from South Carolina.*

William Dearing, A. D. Miller, D. C. Campbell, A. H. Stevens, J. Phinizy, J. Cowles, *from Georgia.*

John H. Crozier and Thomas C. Lyon, *from Tennessee.*

Abner McGehee, E. A. Holt, *from Alabama.*

Mitchell King, William Patten, *from North Carolina.*

James Gadsden, Wm. J. Mills, *from Florida.*

Art. XIII.—RAILROAD ENTERPRISES AT THE SOUTH.

The people of South Carolina are still alive to the importance of bringing their sea coasts into contiguity with the mountains, and giving

a market to the produce so abundantly grown there. There have been several conventions held, to some of which we have referred, and to others shall refer at this time.

The convention of the COLUMBIA AND GREENVILLE Company lately met in the former city, and was presided over by the Hon. Joel R. Poinsett. It proceeded to organize and elect officers and make such arrangements as might be necessary in carrying out the enterprise. The Hon. J. B. O'Neal was elected President of the company.

This convention, on the motion of A. G. Summer, Esq., unanimously adopted the following resolution, for which it may be argued, we feel no little gratulation.

Resolved, That it is with pleasure we learn our late fellow-citizen, J. D. B. De Bow, Esq., now of New Orleans, hereafter intends to devote a large portion of the COMMERCIAL REVIEW to the Railroad interest in the South, we therefore heartily recommend that work to the patronage of all persons interested in such enterprises.

The Convention at Charlotte was well attended by delegates from North and South Carolina. The report on the road to that place from some point of the South Carolina road was read by our friend Wm. H. Trescott, Esq., of Charleston, who it delights us to perceive is ever ready to give his time, service, and intelligence to matters of this character. How far preferable is this to the course of stormy politics in which most of our rising young citizens indulge.

The Columbia South Carolinian speaks in high terms of the ends to be accomplished by these projected roads, and of the country through which they are to pass.

Immediately above this, we have a fine cotton region, capable of producing four times as much more cotton as it has ever grown. Then follows a grain, fruit and tobacco country, characterized by abundance, and fertility, possessing advantages of climate unknown to the grain growing regions of the North, and adapted to infinitely more varied productions. This region extends to the foot of the mountains, and in addition to the cereal productions, immense quantities of the finest hay can be made, which, from its bulk, has heretofore been left to rot in the beautiful meadows of North Carolina. These two railroads take in all the tributaries of the Saluda and Broad river on the one hand, and those of the Catawba and Yadkin on the other, a country already in a high state of cultivation, and possessed by a population who only desire the means of communication and commercial intercourse with the world, to bind them to their homesteads forever. Most of them have long resisted the flattering temptation of emmigration to the rich lands of the west, and enterprize and capital now properly invested will make their posterity, for generations to come, happy, contented and wealthy.

The question of route for the Charlotte road is much and keenly discussed in the South Carolina papers, Camden and Columbia both contending for the terminus.

The convention at Winnsboro prefer the claims of the latter town, and remark what is worthy of note.

The country all the way is populous—the lands are fertile, well cultivated and productive. The staples are cotton and grains—bulky and difficult for wagon trans-

portation, when the roads are bad, and it so happens that these are of the very worst character, on the whole line which it is proposed to take this road over. There can be no doubt but the railroad on th's line, would take all the travel and trade of the country. To judge how much this would be with accuracy, is perhaps impossible; but we may find something to guide us, by looking at what has been the effect on travel over our railroad. It was supposed when the road was built from Charleston to Hamburg, that 10 passengers each way might pass daily, which would be over 3000 per annum: but this was found vastly below the reality—they rose rapidly in numbers to 1834, when they were 26,649; 1835, 34,283; 1836, they were 39,-219; 1837, they were 41,554; in 1838, 44,487. They then fell off in the time of distress, as low as 29,279, but rose again, as the country recovered, until 1844, they were 54,146; in 1845, they were 56,785; in 1846, 64,136, and so far in 1847, the four first months, show 35,633, against 28,406 for the corresponding four first months of 1846.

The report of Peter Conrey, Jr., President of the New Orleans and MEXICAN GULF RAILWAY has been kindly furnished us by our enterprising fellow-citizen, Alexander Gordon, Esq., who is about to proceed to Europe on the business of the Company.

The following passage from the report will be read with interest:

The Directors, fully impressed with the important benefits which would result from the extension of the road to the vicinity of the splendid and secure harbor near Cat Island, and seeing how perfectly this harbor is adapted for the reception of ocean steamers of the first class, and how immense the advantages which would result, not to New Orleans only, but to the whole valley of the Mississippi, if direct mail and passenger communication be opened from Europe with said harbor, several months ago despatched to England, Mr. Germain Musson, Comptroller of the Company, and a member of the Board, with the double object of inducing the British Government and the West India Steam Packet Company to cause the monthly steamers, passing through the Gulf on their way to and from the Mexican ports, to call and land and receive mails and passengers in going and returning, and to raise the needful funds by a sale of bonds or stock to extend the road to Nine Mile Bayou, near Cat Island. The Directors have great pleasure in stating that, through the indefatigable exertions of Mr. Musson, there is every reason to hope that both the great objects of his mission may be very soon and happily accomplished, for the West India Steam Packet Company now give their fullest aid and support to the proposed change, and have officially offered to the British Admiralty, if permitted to call at Cat Island Harbor, to re-model their route so as to deliver the outward mails at Bermuda, Nassau and Havana, in a greatly shorter time than heretofore, and to place our letters in this city in 28 days or less—while the most eminent merchants of London and Liverpool, connected with the trade to the West Indies, to this country and to Mexico, and standing at the very head of the commerce of the world, both in wealth and intelligence, have, by public memorial to the British Government, expressed their most earnest desire that the proposed change should be made, as being one of the greatest importance, and likely most materially to affect and improve the commercial intercourse between Europe and the whole South-west of the United States.

From these circumstances the Directors are induced to hope for the

most favorable issue to Mr. Musson's mission; and it is gratifying to the Board, and must be so to the Stockholders, to find the plans which have emanated from this Company are supported and urged forward, after the most careful scrutiny and examination, by the most eminent merchants of Europe.

The road has now reached within three miles of the shore of Lake Borgne, 25 miles. The remainder is in progress of rapid completion. From Lake Borgne, at Proctor's Shell Bank, it is designed to extend the road 14 miles further, to the shore of the lake near Malheureaux Island, where a safe harbor can be secured, 18 miles from Pass Christian and 125 miles from Mobile.

For the following particulars, we are indebted to the Company's Circular:

"The road after leaving the city passes through four or five miles of rich and fertile land, where country houses, pleasure and market gardens, brick yards, saw mills, &c,, already begin to yield a revenue to the road which is continually increasing. At six miles from the city it enters the first sugar plantation, and from thence it passes through one continuous line of flourishing sugar estates, twenty or upwards in number, to the Proctor plantation on Lake Borgne, except where it passes through two villages in Terre aux Bœufs. The road follows the course of the Mississippi for the first twelve miles and approaches close to the river at Mr. Ducros' plantation. At this point the road receives and deposits all travellers to and from the rich and extensive parish of Plaquemines, on the left bank of the river.

The road here leaves the river, and takes a direct course for Lake Borgne, through the fertile country and sugar plantations already mentioned. The transports of the supplies and crops of these plantations will form no inconsiderable source of revenue. The road will first reach Lake Borgne at or near Proctor's Shell Bank, a beautiful spot extending nearly a mile along the lake shore, elevated from six to ten or twelve feet above its water, and covered with a fine growth of Live Oak trees. An agreement has been entered into with the proprietors of this estate for the improvement (for their benefit jointly and equally with the proprietors of the railroad) of this place so as to render it a convenient site for summer residences, and bathing establishments, etc., and the general government has, through the land office, directed a reserve of three miles of the lake shore adjoining, and extending one mile in depth, for the use of the railroad.

Lake Borgne is a most beautiful piece of water, affording delightful bathing, the water quite transparent, it being in fact an arm of the sea, although entirely sheltered from its violence. It is to be expected that when an hour and a half of railroad travel through a rich and cultivated country will place the citizens of New Orleans on its shores, thousands will be disposed to avail themselves of this cheap luxury, during our long summers, when the pressure of business is removed. Lake Borgne abounds with the finest sea and lake fish and oysters, and it is from thence that the city draws a large portion of its supplies. The road also passes near Lake Lery, famous for its abundace of fish, game

and oysters. The transport of these articles alone will afford a handsome revenue to the road."

In relation to the ship harbor, it may be well to remark that Professor Bache of the U. S. Coast Survey is now on the Gulf of Mexico, where all the necessary soundings and surveys will be made and charts presented, exhibiting in the most satisfactory manner the capacities for commerce which may exist. We have had the honor of an interview with Prof. Bache, and have received his reports and charts so far as they have been published, which, at an early day, will receive an elaborate notice at our hands.

The Company's Circular concludes:

"The proprietors have purposedly avoided entering on the advantages which may result to this road from the establishment of a great sea port in the neighborhood of Cat Island, where it is well known that there is depth of water sufficient for line of battle ships; but it is perfectly true that the proposed terminus of the road will not be more than ten or twelve miles from this magnificent and secure harbor, and as the improvements in the construction of locomotive engines are already so great that, for six or seven thousand dollars, an engine can be constructed of sufficient power to propel a thousand tons of merchandize at the rate of ten or twelve miles per hour, it is impossible to foresee what may be the movement of freight as well as passengers in the course of a very few years."

The report of Col. James Gadsden, President of the South Carolina Railroad Company, at their meeting of the present year, thus refers to the different movements now in progress in South Carolina:

"The Report of the Engineer, Mr. McRae, of the Camden Branch, shows the present condition and progress of that work, notwithstanding a suspension of operations the last spring for nearly two months, with a hope that the citizens of Sumter might be accommodated by a change of route in the road proposed; and the subsequent summer and winter interpositions of successive floods in the Wateree river, the work has been steadily progressing, and a hope is still encouraged that with the powerful aid of steam, and energetic contractors, the passage of the Wateree River and Swamp may yet be accomplished in time to enable the Company to press forward, with all practicable dispatch, during the summer and fall months, with the superstructure to Camden. A large portion of the grading along the entire line, is already completed; the whole is under contract; the wooden superstructure with the Rails, between the Congaree and Wateree are now in progress. Iron sufficient for the completion of that section has arrived, and if the floods of the Wateree do not interpose any further obstacles, than those which have already been encountered, the Engineers feel confident that all the objects, as to time, in completing the road will yet be realized. But the best devised plans, and the most powerful of human efforts have, at times, to yield to elements which are not to be controlled, and often too powerful, successfully to resist.

Your Board of Directors, with much satisfaction, congratulate the

Stockholders on the beneficial results of that liberal policy, early adopted on their part, of extending countenance and credit to all sister roads, having for common objects the bringing the western portions of our Union in more intimate, social and commercial relations with those of the South. The roads in Georgia and Alabama are rapidly and successfully progressing—many of them finished—new roads, penetrating more remote and hitherto inaccessible sections in those and the adjacent States of Mississippi and Tennessee, projected; and Companies in progress of organization for immediate and successful action. The road from Chatanooga to Nashville is no longer a problem, and we have every assurance of the most energetic efforts to commence, and push it rapidly to completion. The Hiwassee railroad, opening a communication to Knoxville and the interior of Eastern Tennessee, has been revived, and will receive a new impulse on the completion of the Western and Atlantic to Cross Plains, now only awaiting the daily expected arrival of the iron to finish it. The interior of Alabama is looking with deep interest to a railroad communication between the Georgia and Tuscaloosa, by the Rome Branch and Valley of the Coosa. Superadded to these, charters have been granted by both of the legislatures of North and South Carolina, and our people everywhere awakening to the importance of rendering more intimate and binding by railroads, the city of Charleston with the interior districts of our own and more Northern sister."

Mr. Thompson, Surveyor of the NASHVILLE AND CHATANOOGA RAILROAD, reports to the Commissioners of that enterprise under date of February, 1847. The whole length of the road from the termination of the Georgia works to the city of Nashville will be 152 miles, and approximate cost $2,810,000.

That there will be a connection, Mr. Thompson remarks, between the south Atlantic coast and the great West at an early period, no one acquainted with the extent and importance of the interests to be beneficially affected by it can for a moment doubt—and that the route of your road is the most advantageous for such a communication is equally clear. Through the Cumberland it brings the mouth of the Ohio—the heart of the west—more than 700 miles nearer to the Atlantic than by any of the present avenues of commerce, an advantage which must claim for the line, a large share of the travel and transportation of the products and consumption of the Mississippi valley. It would seem unnecessary, however, to go beyond the country which now makes Nashville its market, to find ample business to justify the construction of this railroad—opening as it does to Middle Tennessee, a direct route to consumers of her present products, distributing them through Alabama, Goorgia, Florida and Carolina, by means of the net work of railroads diverging from Atalanta, the Atlantic end of the Georgia State railroad—leaving out of view the foreign market for Indian corn, her great staple, which will find at Charleston and Savannah a cheap and ready transit to Europe.

Art. XIV.—ORIGIN OF THE AMERICAN INDIANS.*

"The only certain means by which nations can indulge their curiosity in researches concerning their remote origin, is to consider the language, manners, and customs of their ancestors, and to compare them with those of the neighboring nations."—1 *Hume's Hist. of Eng.*, p. 1.

I have looked into a few histories and other works, with a view to the collection of data upon which I might feel myself justified in presuming to attempt a theory upon the origin of the Indians.

Who are the Indians? Of what race descended? Were their ancestors indigenous or immigrants? And if immigrants, how did they get here? are questions which have been often propounded, but never, so far as I know, satisfactorily answered. Nor shall I undertake to answer them. From the mere imputation that I thought myself capable of such a task in view of all the difficulties which surround it, my mind would shrink overwhelmed with confusion. But living in this happy country, where every man, however humble, has a right to give an expression to his opinions,† I have concluded to place before the public my crude and hasty reflections on this perplexing subject. Avowing, in advance, that I attach but little importance to them myself, and only publish them with the hope that they may prove not altogether uninteresting as speculations, however unsatisfactory as a theory.

In the first place I believe that the fore-fathers of the Indians were not indigenious, because the admission that they were would militate with the biblical genealogy. Our religion teaches us that the first parents of the whole human race were placed by the hands of the Almighty on the banks of the Euphrates, and that thence their descend-

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* *To the Editor:*—The preceding article was in the first instance designed as an appendix to a biographical sketch of the late Gen. Samuel Dale, a partisan officer whose deeds of romantic valor are well remembered on the frontiers of Georgia and Alabama. It is from the pen of Franklin Smith, Esq., an eloquent member of the Mississippi bar, and more recently an officer of the U. S. Army, serving in Mexico. He entrusted his MS. to me, and I had incorporated it with a more elaborate work, to be published as our joint production, but these papers were all lost by an unavoidable casualty. Captain Smith, more fortunate than myself, has preserved the original copy of his sketches, and I propose to furnish him with all the documents of value that remain in my hands. He will employ the few leisure hours that his professional engagements allow to re-produce the work in a form more extensive than heretofore contemplated. He is a finished scholar, an ingenious and philosophical thinker, a bold and vigorous writer, and as his materials are new, abundant and authentic, the public may anticipate a work of great interest, illustrative of border life, and of that terrible frontier warfare which for so many years harrassed and desolated the infant settlements of the southwest.

Most respectfully,
Your obedient servant,
J. F. H. C.

† Rara temporum felicitate, ubi sentire quæ velis, et quæ sentis dicere licet. Tacit.

ants scattered to the surrounding countries. That after several generations, owing to their abominable wickedness, all but one family were destroyed, who landed from the ark in the same region where the first parents existed. My faith in this account, supported as I believe it to be, by all history, moral, physical and political, is firm and indestructible. I will assume, therefore, as a postulate, that the ancestors of our Indians were emigrants. Then of what race were they, and how did they arrive here?

I believe that the probabilities on the subject of their origin, for they are but probabilities, may be reduced to three propositions:

First. That the Indians are descended of the ancient German tribes.

Second. That they are the descendants of the ten lost tribes of Israel, or some of them, carried into captivity by the king of Assyria, about six hundred years before Christ, and never returned.

Third. That they are the descendants of some of the Nomadic tribes scattered over ancient Scythia, now Siberia, and the eastern part of Russia, in Europe.

Pursuing the plan recommended by Hume, so far as to contrast the manners and customs of nations with those of the Indians whose origin we seek, I present the following syllabus* of the manners and customs of the German tribes, and will then proceed to give a similar one as to the other nations mentioned in the second and third propositions.

The Ancient Germans.

1. Preceding their battles, they sung war songs in honor of their heroes, accompanied by fierce vociferations and gestures. Tacit., sect. 2, 3.

2. To make feints, to retreat and return, and to attack their foes from woods, marshes, and secret places, was their manner of fighting. Tacit. 6. Cæs. Lib. 6–34.

3. They always bore their slain from the field, even in the most desperate battles. Tacit. 6.

4. They had no temples, no sacrifices. Tacit. 9. Cæs. 21.

5. They were governed by chiefs who ruled not by coercion, but by example; by taking the post of danger and exciting the admiration of their tribe. Tacit. 7–14. Cæs. 23.

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* The references under this syllabus are Cæsar, De Bell, Gall, and Tacitus De Situ, Mor., &c., Germ. I had made my syllabus from the authorities referred to, when I accidentally discovered that I had been partially anticipated by Dr. Robertson in a note to his "History of the Emperor, Charles V." The reader will find the note p. 504, being note 6, to text p. 12. And that I may not claim any thing which might not be accorded by all, he will please credit Dr. Robertson with so much as he finds there corresponding to what he finds here.

6. Their councils were composed of the chiefs, and held and conducted precisely as those of the Indians. Tacit. 11. Cæs. 23.

7. They always went armed. Tacit. 13.

8. They paid no attention to agriculture, their life being passed in war and hunting, and when not so engaged they gave themselves up to sleep and laziness.* Tacit. 14, 15, 31. Cæs. 21, 22, 29.

9. They raised nothing but corn, and this was cultivated entirely by the women; the latter performing also all the drudgery. Tacit. 15, 26.

10. Their houses were miserable huts of the rudest materials and construction. Tacit. 16.

11. The clothing of men and women left a great part of the body naked. Tacit. 17. Cæs. 21.

12. Exchange of presents constituted the marriage vow. Tacit. 18.

13. They delighted in gifts, but neither took to themselves credit for what they gave, nor felt themselves under obligations for what they received. Tacit. 21.

14. Their children ran about their huts dirty and naked, but they were otherwise treated by their parents with the utmost tenderness and affection. Tacit. 20.

15. Their food was milk, wild fruit and the flesh of wild beasts. Tacit. 23. Cæs. 22.

16. They had a great passion for gaming, betting every thing they possessed, and somtimes even their liberty. Tacit. 24.

17. They were temperate in eating, but passionately fond of any intoxicating drink.† Tacit. 23.

18. They had no certain land-marks or boundaries to their fields and occupancy was their only title. Cæs. 22.

19. The tribe (Suiones) inhabiting the borders of the North Sea, built their boats and navigated them as the Indians do.‡ Tacit. 44.

20. The Fenni, (Finlanders,) the most northern tribe described by Tacitus, used bows and arrows as their only weapons, the arrows being pointed with bone. In fact, the whole description given of them by the historian is remarkable, when considered in reference to the condition of many of the modern tribes of Indians.§ Tacit. 46.

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* Mira diversitate naturæ, cum iidem homines sic ament inertiam, et oderint quietem. Tacit.

† Haud minus facile vitus, quam armis vincentur. Tacit.

‡ "Forma navium eo differt, quod utrimque prora paratam semper appulsui frontem agit: nec velis ministrantur, nec remos inordinem lateribus adjungunt." Tacit.

§ Let the reader examine the graphic description from "Fennis mira feritas," to the conclusion.

Manners and Customs of the Jews.

1. They had a feast when their corn ripened, called "The Feast of the First Fruits," during which there was rejoicing and a cessation of all work. Levit. chap. 23, verse. 9 to 15. Numbers ch. 28, v. 26. Exod. ch. 23, v. 15, 16.

2. They frequently destroyed men, women and children in their wars. They were cruel in their punishments and deadly in their revenge. Joshua, ch. 10, v. 20 to 40. Judges, ch. 21, v. 10. Second Samuel, ch. 12, v. 31. 1 Kings, ch. 11, v. 15, 16. Ibid. ch. 16, v. 11. Judges, ch. 4, v. 21. 1 Kings, ch. 2, v. 6.

3. By divine institution they were never to mingle with other people. Deuteron., ch. 7, v. 1 to 7.

4. Their God was an Invisible Spirit.

5. The murderer was destroyed by the nearest relation of the deceased. Josh., ch. 20, v. 6. Second Samuel, ch. 14, v. 6, 7, 11.

6. Inferior offences were punished with stripes. Deuteron., ch. 25.

7. Wizards and witches were put to death. Levit., ch. 20, v. 27. Second Kings, ch. 23, v. 24. 1 Saml., ch. 28, v. 9.

8. Polygamy was allowed and practised. The Old Testament Passim.

9. They had no formal marriage ceremony. Consensus et concubitus fecerunt nuptias. Gen., ch. 24, v. 67. Ibid., ch. 29, et passim.

10. They divorced their wives at pleasure. Deuteron., ch. 24. Matthew, ch. 19, v. 7, 8.

11. They did not disfigure themselves or cut off their hair at the death of relations. Deuteron., ch. 14, v. 1, 2.

12. They had a jubilee or grand celebration, (Levit., ch. 25,) at which all offences were forgiven, except murder; all debtors released, and all servants set free *except slaves, the children of heathens.* Numb. ch. 35, v. 31, 33. Levit., ch. 25, v. 44, 45, 46.

13. They had prophets in every village, who were always consulted before any step of importance was taken, and who undertook to foretell the event. 2 Kings, ch. 4, v. 38. 2 Chron. ch. 18 v. 1 to 9, and 21, 22. Matt. ch. 7, v. 15.

14. They called their chief father. 1 Kings, ch. 24, v. 11.

15. They supported their priests and exempted them from contributions for the common good. Numb. ch. 18, v. 24. Ezra, chap. 7, v. 24.

Manners and Customs of the Scythian Tribes.

1. They supported themselves, some by their herds, others by the chase. Herodotus. Melpomene, sect. 2, 22, 46.*

* Here I will remark that before travel was carried to the extent which it is at pre-

2. Bows and arrows were their weapons of war. Ib. 9, 10, 22, 46.

3. They had no fortified towns. They lived in moveable huts or tents; could advance or retreat at pleasure, and attacked their foes from places of concealment. Ib. 46, 127.

4. They paid no attention whatever to agriculture. Ib. Id.

5. *They scalped those they killed, precisely as the Indians do,* preserved the scalps as trophies of their prowess, and he who obtained the most received the highest honors. Ib. 64.

6. They had among them prophets or diviners. Ib. 67.

7. All the Scythian tribes had great repugnance to foreign manners. Each one of them adhered to the customs of their forefathers. Ib. 76.

I do not believe that the Indians are the descendants of the Germans. In the first place, the Germans have ever been noted for blue eyes, fair skin, or red and light hair.* Secondly, they had no knowledge of the mariners compass or of navigation, nor had they the remotest idea of there being land to the west of them. It is evident, therefore, that in their small open boats they would not have voluntarily attempted to emigrate by water, to traverse seas lashed by perpetual storms. Admitting that there were instances of their being driven out to sea by the sudden rising of an easterly wind, yet we may suppose that they were not provisioned for so long a voyage, and accordingly soon perished from famine, or that they were swallowed up by the ocean; or, that as soon as the wind was sufficiently lulled to admit of making headway against it, steering towards the rising sun, they made for their country with all possible despatch. In the next place, the hypothesis that they emigrated by land, crossing at Beering's Straits, will not bear, I think, the test of reason or experience. To have done so they would have had to traverse two thirds of that part of the globe. And what possible circumstances can we imagine which could have induced a free, brave, and hardy people, whose lives were dedicated to war, to travel in a straight line two-thirds of the globe? To climb rugged mountains, and pass the broadest rivers, saluted at every step they took by a ste-

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sent, it was the fashion to pronounce the statements of Herodotus as fabulous and unfounded. But as some majestic column of ancient architecture, which after a long repose in dust and neglect, being replaced upon its former pedestal by the pious hands of some admirer of genius, again challenges the admiration of the artist and the wonder of the world, so the authority of Herodotus, rescued at length from the rubbish of ridicule, stands vindicated by the more extended observation and experience of modern travellers, and his name has been restored to the proud niche which it originally occupied in the temple of fame, the "Father of History."

* Tacit. 4.

rile soil, by ice and snow, and those forbidding features of nature thickening in gloom and terror the further they progressed? On the other hand, are we not justified in pronouncing as morally demonstrable, that those warlike Germans would have never turned their faces towards the inhospitable north-east, but that in their emigrations they would have done as their descendants have ever done since, taken up their march towards the more inviting plains of the sunny south?

Judging from natural causes only, we might readily embrace the third proposition, and conclude that the first emigrants to America were of some of those Nomade tribes, which roved over the vast plains of northern Asia. Independent of the similarity of manners between these tribes and the descendants of those emigrants as we now find them, we can well imagine that a body of water* only thirty-nine miles wide, frozen over for a greater part of the year, would not be likely for any considerable period of time, to prove a barrier to the enterprise of men whose lives were devoted to war and hunting. Men who, having no fixed habitations or ties to attach them to a particular district, wandered up and down the earth as led by the chase or the hope of plunder. There are many circumstances under which the mind can conceive, that such a people, inhabiting contiguous regions, would have crossed that narrow frith. A vanquished party, pursued by superior force. Outcasts, exiles, or criminals, seeking to hide their disgrace in a remote country, or to avoid the vengeance of their enemies. Wild beasts escaping from one shore to the other, and drawing after them the ambitious or the hungry huntsman. These, together with many other causes for the migration of some of those people from the Asiatic to the American continent, will at once occur to the reflecting reader. But holding as I do the doctrine of Rollin, "that the providence of the Almighty has, from all eternity, *appointed the establishment*, duration and destruction of kingdoms and empires,"† and drawing my conclusions as well from a comparison of customs as from considerations which I deem of more weight and moment, I am induced to believe that it is most probable that the Indians are the descendants of the lost tribes of Israel.

The institutions and manners of the Indians which correspond with those of the Jews, are such as would be most likely to survive the loss of their men of learning, and to triumph over their degeneracy and barbarism, over distance and time. Their belief in the unity of God,

* Beering's Straits.

† 1 Rollin, 14.

and that he is a spirit, "the Giver of breath"* would live in the minds of a people however rude, after their ceremonies of worship should have been lost amidst war, blood, indigence and ignorance. It is natural that they should have their jubilee annually, instead of every fiftieth year, as barbarians, like children, are always anxious for the speedy recurrence of times of mirth and rejoicing. Their solemn pause and motion of reverence towards the place of their tribe, when absent, may be a remnant of the Jewish custom to bow towards their Holy City, when making their supplications to God.† In fine, all the ceremonies and customs which they retain resembling those of the Jews,‡ it will be found were such as could not be otherwise than perpetuated from their frequent use and recurrence, while such as they do not retain, are such as a people relapsing into utter barbarism would necessarily lose. There is strong evidence to show that the Indians have no faith in the immortality of the soul. This might be expected of them, supposing them to be descendants of the Jews, since one-half of the latter people did not believe in that doctrine, and the other half had a very confused idea about it.§

It is well known that the Israelites were God's chosen people; tha He exacted obedience of them corresponding to his mercies, and denounced against them by his prophets the most dreadful punishments if they forsook his statutes and commandments; that all the tribes were carried into captivity by kings of Assyria—the ten tribes which revolted under Jereboam first, and the tribes of Judah and Benjamin soon after; that at the restoration under Cyrus, the latter tribes were the only ones which returned to Jerusalem;‖ that these had already forgotten many of their laws and had to a considerable extent taken wives of the nations among which they had sojourned.¶ I learn from the able notes to the "New Family Bible," (published by the Protestant Episcopal Church) that the ten revolted tribes (which remained in captivity) were colo

* Genesis, chap. 2, v. 7.

† 2 Chron. ch. 6. v. 21. 26.

‡ Many of the Jewish customs resembling those of the Indians, (but which I did not embrace in my syllabus because it would nave made it too prolix, and would have been giving details familiar to every one,) will be remembered by the reader, such as their music, their fondness for bracelets and ear-rings, their rejoicing over the death of enemies, war songs, dances, etc., etc.

§ Matthew, chap. 22, v. 23. Buck's Dictionary, Titles "Sadduces," "Future State." etc.

‖ Ezra chap. 1, Comm. to the "New Family Bible," 2 Kings, chap. xvii. v. 7.

¶ Nehemiah chap. viii. v. 14. Ibid. chap. xiii. Ezra chap. x.

nized in the mountainous parts of Media,* the north-east part of modern Persia. The next country to the East was what is now called Affghanistan. I learn from an authentic account of the Affghans that they have a tradition that they were descended of the Jews; and whoever will take the trouble to refer to the authority, will be astonished at the correspondence beween their laws, manners, and customs and those of the ancient Jews and the modern American Indians.†

It strikes me that some of the lost tribes following the chain of mountains which skirt western Persia and the north of Affghanistan, first wandered into the latter country. That there mixing their blood with some of the swart Asiatic tribes,‡ they were then driven by war or their dissatisfied disposition—pushed on rather by the providence of God than the act of man, towards the north-eastern regions of Asia. and that from a succession of like causes they finally became inhabitants of America. I would suppose this wonderful migration to have been consumated from five hundred to a thousand years before the discovery of America.§ It would not have taken many hundreds of families to have populated this continent within that period as densely as it was found to be at the time of its discovery.‖

Let no one say that this wonderful emigration could not have occurred without there having been some memorial of it preserved by poets or historians. From the death of our Saviour in the reign of Tiberius Cæsar, up to about the close of the fifteenth century, rivers of blood overflowed the earth, and chaos and night seemed to have resumed their sceptre over the world. It was not until about the last above-mentioned period, when the use of the mariner's compass, the extension of commerce, the discovery of America, the establishment of the press

* Notes to 2 Kings, chapters xv. xvi. xvii., and see Account of Affghanistan, 298.

† "Account of Affghanistan," affixed to the History of Persia, by James B. Frazer, Harper's Edition, pp. 298 to 314.

‡ It can readily be conceived that a race of people like the Jews, having black hair and black eyes, could in the course of a few generations be changed to the complexion and appearance of the Indians. Any traveller may see in New Orleans and Charleston, persons of mixed races, whom he would take for Indians, but who have no Indian blood in their veins. It is believed that some of the descendants of Ham first settled in Persia.—Smiley's Scripture Geography, p. 23.

§ Perhaps at the close of the twelfth century in the days of Genghis Khan, or the close of the sixth century in the days of Mahomet.

‖ They were probably preceded by Cimmerians (or some other giant race) who having built the structures and edifices which so much puzzle antiquarians, destroyed each other in war, or were partially destroyed by earthquakes and famine, leaving the remnants of their race in Patigonia.—Herodotus, Melpom. 11, 12.

and reformation in religion, gave suffering humanity room to hope for something better than chains aud slavery, blood and murder—that the human mind was capable of making a faithful record of anything beyond the immediate sphere of its action. Learning "slumbering in the urns" of classic literature, or locked up in monkish cloisters—her votaries overawed by power or paralized by superstition were incompetent to the task of a faithful delineation of even the great events in Europe, much less to describe the intermingling and the flow of national existencies in Asia.

Unless the hand of God be in it, how is it, I would ask, that the Indians are the only conquered people known to history, whom neither the persuasions of religion; the example of an improved condition around them; the terrors of superior power, nor the certainty of national extinction, can induce to lose their distinctive character and to blend their identity with that of their conquerors? Experience teaches us that were they to change their habits, appropriate to themselves the earth and become agriculturalists, the whites would speedily intermarry with them, and thus they would become a new, a civilized and happy race. But no! they are the same stiff-necked and peculiar people who together with the tribes of Judah and Benjamin, rejected the mercies of the theocracy and scorned the ordinances of Heaven. Like them they are doomed to wanderings, to persecution, and ruin. When under the protection of the victorious eagles of the Republic, the tide of civilization shall have rolled to the Pacific, it may be that the remnants of these people, returning to Asia by the route they came, are to be restored as is the promise* to the seats of their former glory, and be permitted with the rest of their brethren to occupy the land of their Fathers.

These things may or may not be. Who shall undertake with oracular authority to pronounce upon them with certainty? With nothing but conjecture to guide us, without a line of history, a single monument, inscription, memorial, or tradition to direct our steps, who shall come with boldness to this great argument? But I have too long trodden upon holy ground. It is not for a man like me to take his stand by the pathway of God's providences, and say, here passed the Persian or the Mead, here the Greek or Barbarian, here the Jew or Gentile, lashed onward to exile or destruction by Omnipotent displeasure.

* Ezek., chap. 36; Isaiah, chap. 65; Hosea, chap. 3.

"Let not this weak, unknowing hand
Presume Thy bolts to throw,
And deal damnation round the land
On each I judge Thy foe."

The mysteries of this part of the subject were better committed to the hands of those able and learned divines who have devoted their lives to the unravelling of the prophecies and the study of the will of God as declared in his holy Word. Even with their aid, however, I despair of ever seeing them expounded. Like the ten thousand arcana of our moral and physical world, which perplex us on every hand from the humblest blade of grass beneath our feet to the spangled heavens above us, they will remain a sealed book until that perfect day breaks upon our vision when we are to see God face to face, and all the secrets of time and eternity are to be laid open to our view, that the empire of perfect gratitude and reverence may be established, and the boundaries of love and happiness indefinitely extended.

But it needs no prophetic ken, however, or inspired vision to forsee that soon the Indians will disappear from every portion of our country —that soon the beautiful lines of our best poet will be but a true and faithful picture of the whole American continent:

"Erewhile where yon gay spires their brightness rear
Trees waved, and the brown hunter's shouts were loud
Amid the forest; and the bounding deer
Fled at the glancing plume, and the gaunt wolf yelled near.
Look now abroad—another race has filled
These populous borders—wide the wood recedes
And towns shoot up, and fertile realms are tilled;
The land is full of harvests and green meads, etc."

BRYANT.

But who can bid farewell to the Indians without dropping a tear to their memory! In their dark forests deeds have been done such as have rendered the names of Hannibal and Cæsar immortal. But they had no bard to sing them, they had no hisotrian to record them! The ashes of thousands of dead heroes sleep on our plains undistinguished from their kindred dust. Their names perished with the grassy couch upon which they bled! And yet there are some Indian names which the literature of the white man will perpetuate to the latest posterity. As long as magnanimity, boldness of design, eloquence in the council and bravery in the field shall secure the admiration of men, the names of Powhatan, Pontiac, King Phillip, Logan, Red Jacket, and Tecumseh will never be forgotten!!

Art. XV.—AMERICAN TOBACCO TRADE.

The reader will find the statistics of this branch of our industry elaborately compiled and presented in the number of *Commercial Review* for October and July, 1846, together with many interesting and important particulars in relation to its cultivation, trade, consumption, etc.

The able speech delivered during the last Congress in the House of Representatives by Mr. Chapman, of Maryland, affords some additional light, which we gladly introduce into our work. Beyond his facts and statistics, however, we are unwilling to follow him, as there are doctrines and opinions in the speech touching upon the systems of protection, discrimination, countervailing duties, etc., all of a highly political and party character.

Tobacco was one of the earliest American exports, and the chief one before the introduction of cotton. Its statistics until lately, have not been very accurate. The few principal tobacco-growing States, Virginia, Kentucky, Tennessee, Maryland, and North Carolina, from 1820 to 1840, produced about 117,000 hhds. a year. The product of 1840 reached 175,126 hhds., or 219,163,319 lbs., of which 147,973 hhds., or 177,351,600 lbs., were exported. The crop of 1842 was 194.694,891 lbs. Its bulk is produced west of the mountains, and finds a market at New Orleans. It is the second agricultural interest of the country.

EXPORTS OF THE UNITED STATES 1844–5.

Fisheries,		$4,507,124
Forests, peltry, ashes, etc.,		6,550,421
Wheat and Flour,		5,735,372
Rice,		2,160,456
Cotton,		51,739,643
Cotton, manufactured,		4,372,928
Other,		6,307,721
TOBACCO LEAF,	$7,469,819	
Tobacco, manufactured,	538,438	—8,008,317

EXPORTS OF HOGSHEADS OF LEAF TOBACCO FROM THE UNITED STATES.

Years.	England.	France.	Hanse Towns.	Holland.	Italy.	Other places.	TOTAL.
1836	36,822	7,853	22,246	11,148	618	22,775	109,442
1837	20,733	9,110	28,863	22,739	239	18,558	100,232
1838	24,312	15,511	25,571	17,558	1,452	19,189	100,593
1839	30,068	9,574	14,303	12,273	897	11,980	78,995
1840	26,255	15,640	25,649	29,534	2,631	19,775	119,484
1841	41,681	17,586	36,517	26,203	1,222	24,619	147,828
1842	36,086	15,938	42,614	36,079	1,841	26,152	158,710
1843	21,029	11,406	24,504	19,519	865	17,227	93,454
1844	38,584	21,748	40,604	28,814	1,459	31,835	163,042
1845	36,111	18,271	46,560	29,027	5,133	22,166	147,168

Exports of Pounds of Manufactured Tobacco from the United States.

Years.	Hanse Towns.	Holland.	Engl'd. & Brit. Am. Colonies.	France.	Other places.	Total.
1833	136,846	169,682	710,660	1,259,856	628	1,512,758	3,790,310
1834	76,794	17,394	671,923	1,576,648	60,000	1,553,820	3,956,579
1835	238,795	——	755,853	1,342,924	21,654	1,458,628	3,817,854
1836	11,459	——	217,099	1,196,082	1,650	1,820,387	3,256,675
1837	77,8 8	——	828,525	1,262,340	18,571	1,428,337	3,615,591
1838	280,123	34,603	1,694,571	1,608,908	51,388	1,338,554	5,008,047
1839	276,801	136,973	1,454,996	1,266,716	——	545,352	4,214,943
1840	526,236	43,467	2,497,664	1,831,536	7,550	1,880,713	6,787,165
1841	257,124	31,364	2,825,737	1,769,935	59,982	2,559,602	7,503,644
1842	234,449	89,784	1,144,539	1,442,337	137,480	1,385,632	4,434,214
1843	48,248	55,714	990,083	1,047,718	107,832	1,154,657	3,404,252
1844	362,042	30,245	1,634,055	2,026,884	33,463	1,960,189	6,046,878
1845	143,064	40,349	1,741,699	1,857,872	55,992	1,475,977	5,312,971

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Countries Importing American Tobacco.

TOBACCO—Whither Exported—1845.	Quantity. Hhds.	Value. Dollars.
Russia,	13	733
Prussia,	..	....
Sweden and Norway,	1,686	60,412
Swedish West Indies,	18	1,005
Denmark,	252	13,552
Danish West Indies,	201	9,582
Hanse Towns,	46,460	1,916,311
Holland,	29,027	1,182,670
Dutch East Indies,	.....	.....
Dutch West Indies,	153	6,829
Dutch Guiana,	3	102
Belgium,	2,448	99,662
England,	26,111	1,980,940
Scotland,	58	4,097
Ireland,	..	....
Gibraltar,	6,634	237,555
Malta,	194	6,464
British East Indies,	4	331
Cape of Good Hope,	.	...
Mauritius,	11	630
Australia,	..	...
Honduras,	24	1,824
British Guiana,	64	4,215
British West Indies,	505	29,179
British Amer. Colony,	483	27,755
France on the Atlantic,	11,313	694,369
France on the Mediter.	6,958	365,706
French West Indies,	978	41,608
French Guiana,	44	3,658
French African ports,	..	.....
Bourbon,	20	1,272
Spain on the Atlantic,	3,892	198,956
Spain on the Mediter'n.	....	.....
Teneriffe and other Canaries,	....	.....

TOBACCO—Whither Exported—1845.	Quantity. Hhds.	Value. Dollars.
Manilla and Philipine Islands,	..	....
Cuba,	44	2,322
Other Span. W. Indies,	75	4,615
Portugal,	..	....
Madeira,	..	....
Fayal and other Azores,	..	....
Cape De Verd Islands,	29	1,589
Italy,	5,133	299,308
Sicily,	76	3,759
Sardinia,	306	14,868
Trieste and other Austrian ports,	1,090	78,892
Turkey, Levant, etc.,	52	2,463
Hayti,	363	22,365
Texas,	270	8,049
Mexico,	11	698
Central Repub. Amer.	19	1,255
New Granada,	..	....
Venezuela,	87	5,715
Brazil,	110	7,936
Cisplantine Republic,	56	3,616
Argentine Republic,	57	3,400
Chili,	122	7,366
Peru,	...	....
China,	80	5,845
West Indies generally,	20	1,143
S. America generally,	10	546
Europe generally,	..	...
Asia generally,	..	...
Africa generally,	1,604	104,652
S. Seas & Pacific Ocean	....	.....
	147,168	7,469,819

IMPORT DUTIES ON TOBACCO.

	Manufactured.	*Unmanufactured.*	*Cigars.*
Great Britain,	$2 16 per lb.	72 cents per lb.	$2 16 per lb.
France,	Prohibited.	Prohibited.	Prohibited.
Spain,	Prohibited.	Prohibited.	Prohibited.
Portugal,	Monopoly.	Monopoly.	
Prussia,	$7 48 per cwt.	$3 74 per cwt.	$7 48 per cwt.
Russia,	30 cents per lb.	$3 76 per 36 lbs.	75 cts. per lb.
Austria, (Milan,)	$19 20 per 100 lbs.	$7 20 per 100 lbs.	$19 20, 100 lbs.
Netherlands,	$4 80 per 220 lbs.	28 cts. per 220 lbs. Va; 32 cts., 220 lbs. various.	$4 80, 220 lbs.
Belgium,		47 cts per 225 lbs. Md.	$18 75, 225 lbs.
Hanseatic Towns,			
Denmark,	$3 12 and $4 16 per 110 lbs.	$1 04, 110 lbs. in leaves and stems.	10 cts. per lb.
Sweden,	4 to 64 cts. per lb.	12 cts. per lb.	$1 per 100 lbs.
Sardinia,	Prohibited.	Monopoly.	Prohibited.
The Two Sicilies,	$46 48 per 100 lbs.	Monopoly.	Monopoly.

TOBACCO STATISTICS.

Countries to which it was exported from 1835 to 1838.	*Average Value.*	*Duty per hundred pounds.*	*Av. 1st cost in the U. S per 100 lbs.*
Russia,	$10,712	Leaf with its stems, and stems, $10 66. Leaves without stems, $21 32.	$4 93
Sweden and Norway,	141,999	In Norway, $3 29.	6 72
Denmark,	10,071	Leaves and stems, 42½ cts.	9 64
Holland,	955,835	Virginia, 13¼ cts.; Maryland, 14 1-11 cents.	4 02
Belgium,	185,107	Virginia, 23½ cts.; Maryland, 26 1-5 cents.	6 24
England,	2,870,433	$72 75.	8 76
Scotland,	171,454	$72 75.	13 15
Ireland,	68,283	$72 75.	14 11
Gibraltar,	379,610	Free port.	6 48
Malta,	15,938	Free port.	6 15
Spain, on Atlantic, etc.,	190,517	Monopoly.	9 19
France,	956,556	Monopoly.	7 36
Portugal,	6,360	Monopoly.	6 88
Italy,	86,021	Monopoly.	9 32
Sicily,	2,233	In Naples, monopoly.	5 82
Trieste, etc.,	20,697	Monopoly.	5 84
Prussia,	7,489	$3 31.	3 23
Hanse Towns,	1,188,479		3 87
Other countries,	480,978		
Total	7,748,772		6 25

Against these foreign restrictions upon our tobacco, Government has from the earliest times protested. Mr. Jefferson in 1785 remonstrated to the court of France on the subject, and succeeded in obtaining a relaxation which caused an immediate increase of imports. Gen. Jackson, Mr. Van Buren, Mr. Tyler have delegated special agents to Europe entrusted with the matter, and have co-operated with our ministers at all foreign courts, but to little purpose.

We give a passage from Mr. Chapman:—

"What would be the effect of the repeal of the monopolies by the governments of France, Austria, and Great Britain, and the reduction of the imposts and transit duties by the other European governments upon our tobacco, to a standard approximating to the rate of duties which we levy upon their productions when imported into this country? It would, sir, increase the consumption fourfold; it would put this article, particularly Maryland and Ohio tobacco, which is chiefly consumed in smoking, within the reach of the greater part of their population. They are now excluded from

the use of it by the enormous price which, by reason of the duties, it commands, and it is only used when mixed with the inferior product of their own country. An estimate was made by Mr. Dodge, an intelligent agent sent by this Government to different parts of Europe to examine into the state of the tobacco trade, by which he shows that 422,344 hogsheads would be exported to Europe and consumed there under a moderate rate of duties. His reasoning is plausible, and the conclusions may be correct; but if one-half the amount estimated by him be required, the price would be relatively enhanced, and the planter remunerated for his labor.

"But it would have another important effect; it would increase greatly the amount of exports of the country; would employ a greater amount of shipping; would have an important and beneficial influence upon foreign exchanges, and enable us to import foreign goods at a much cheaper rate. But it has been charged that the price which the planter receives does not depend upon the duty levied upon the article. It would be strange if it did not. The price is affected in a double aspect: first, the high duties must be paid upon that which is consumed which is not contraband. This lessens the amount consumed in every country because it makes a luxury too expensive to be within the reach of any except the opulent, and causes almost all who consume it to mix it with inferior tobacco grown upon the continent. Thus a smaller quantity being required than is imported, the imperative law of demand and supply applies to it, and so much more being produced than is required under the high government exactions for those who are able to consume it, the price must necessarily decline. And again, sir, under the present duties, for instance in England and Austria, the consumer has to pay so much to the government—the tax itself being from from six to fifteen times as much as it sells for here—there is nothing left for the planter.

The principle that the duty upon an article is paid by the consumer must be modified in its application to the high taxes on tobacco. Although paid by the consumer, it is, in some measure, the planter's loss; for the tax paid is by withholding from him a fair price for his commodity. The duty of seventy-two cents in England a pound, makes it cost the consumer eighty or ninety. The government must be paid. If the duty was one hundred per cent. instead of the present high rate, the consumer would obtain it at twenty-two to twenty-five cents per pound, and this would afford the planter a better price than he now receives. The difference, therefore, between twenty-five cents a pound and ninety cents is the planter's loss, supposing the article always to sell at the same price in the English market."

The late treaty concluded by the present administration with the king of Hanover, is likely to aeffct most materially the tobacco interests. The thirteenth article of this treaty stipulates that the import duty on tobacco in Hanover shall not exceed seventy cents per pound, whilst the twelfth permits to all the States of the Germanic Confederation, to avail themselves of the provisions of this convention by means of an official exchange of declarations, provided that such State or States shall confer similar favors upon the United States to those conferred by the King of Hanover, and observe and be subject to the same conditions, stipulations, and obligations. The Washington Union observes upon these clauses:

"Three millions of the principal consumers of our staple are hereafter to pay no higher duty on the article than the inconsiderable one of seventy cents per hundred pounds, while it is to pass free of transit into the heart of Germany, instead of paying for the privilege of conveyance across Hanover about $1,25 per hhd. Similar concessions are expected from the States of the Zoll Verein.

"The Grand Duchy of Oldenburg, as has been seen, has already availed herself of this article, and other States are preparing to do so by changing their import and transit duties to meet the terms required. Mecklenburg-Schwerin, with a population of 500,000 inhabitants, the wealthiest in proportion of any of the continental States of Europe, will become a party at an early day. We learn that the relations of this most respectable Duchy with our country are guided by enlightened and generous statesmanship, and that her population will probably consume more per head in the agregate of our products, under the new mode of duties which she is about to establish, than any European customer we have. The first diplomatic agent ever accredited to Mecklenburg from our country was Mr. Mann, who describes her prime minister as a most intelligent, courteous, and accomplished public functionary.

"It will be seen from the correspondence accompanying the treaty, that the republic of Bremen has consented to abolish her transit duties on the principal American

staples going into Hanover, and that she proposes to adop t a similar measure in favor of goods destined to other States of the Zoll-Verein as soon as those States agree to a reciprocal policy."

SOUTHERN AGRICULTURE.

1.—Our Great Staple—Cotton.

In the May number of the Commercial Review, p. 443, will be found a valuable paper in relation to the Cotton trade and its prospects in the future. Since this publication we have seen in the Liverpool Times an article ftom A. H. Wylie, Esq., formerly a citizen of New Orleans, on the same subject, and are disposed to analyze it for the benefit of our readers.

The crop of the United States, 1846–7, is estimated at 1,770,000 bales, viz.: receipts at New Orleans and Texas, 720,000; Mobile, 310,000; Florida, 130,000; Georgia, 250,000; South Carolina, 330,000; other places, 30,000.

During the past five years the imports into Europe other than American, have been 471,000 bales, but such have been the discouragements in Brazil and the East Indies from low prices and short crops in Egypt, that no larger figures than 375,000 bales, can be fairly assumed. Stock in Europe, 1st Jan., 1847, 622,000, making a total supply for the year 1847, of 2,767,000 bales. The European consumption in 1846, was,

Great Britain,	1,593,000
France,	405,000
Continent,	345,000
United States,	422,000
Total,	2,745,000

What the consumption will be the present year may be enquired. It will be diminished by high prices of food, pressure in money market, and the advance of almost 50 per ct. on the raw material. Manufactured goods have not correspondingly advanced, so that the advantage has been to the planter, importer, and consumer. India and China so far from being glutted with goods, are rapidly exhausting their supplies. The United States will compete largely with the demands from these quarters. Russia will take more than usually of yarn, and from no other source of demand is a falling off probable. The great point, however, is the unsatisfactory position of the spinner, and making all allowance for this, consumption may be safely assumed at 20,000 bales per week for the first six months, and 25,000 for the last six months of the year, making in the whole, 1,170,000 bales.

The consumption of France and the Continent was,

1842—France,	441,000	Continent,	315,000
1843 "	406,000	"	337,000
1844 "	388,000	"	298,000
1845 "	418,000	"	357,000
1846 "	405,000	"	345,000
	2,058,000		1,652,000
Average,	411,600		320,400

Neither on the continent nor in France can we expect this average to be maintained in the present year. In France it will be considerably roduced, and in some parts of the continent, though some of those countries, by our want of food, have increased and not diminished their wealth. It may perhaps be a safe figure to place

the consumption of France at	350,000 bales.
And the continent of Europe at	275,000 "
	625,000

The United States are likely to extend their consumption, which has, year by year, gone on gradually increasing. In 1837 it was only 220,000 bales; last year it reached 423,000, and the wealth which has flowed into America during the past and present year, and of which we have been drained, will largely add to this last figure.—By no competent party is the consumption for 1847 estimated at under	500,000 „
	1,125,000 bales.
Making, with the probable consumption in Great Britain of	1,170,000 "
A total consumption for 1847 of	2,295,000 bales.
Against an estimated supply of	2,767,000 bales.
And leaving a stock on 31 December of	472,000 bales.

which, with the most liberal supply before the end of the year, from the crop of 1847–8, would leave the trade much in the position in which it was at the opening of the year—at the mercy of a new crop, and depending upon its extent even for a sufficiency for "*short time.*"

2.—Culture of the Sugar Cane.

Some one in the parish of St. Mary, and through the columns of the Planter's Banner, over the signature of "*Agricola,*" has been slashing away lately at the valuable paper of our friend, published by us, on the "Cane Culture," by the new and old system. We dislike controversy when it is embittered, and seems to seek less truth than conquest. We would not speak harshly of "*Agricola,*" for there are passages in his paper which evince an inquiring mind and a correct judgment, but we would beg him to remember that reason and argument are the only legitimate, as indeed they are the most irresistible, weapons. He will agree with us that the language of fair and open discussion should be courteous, dignified and respectful, doing ample justice in every point, to the views, feelings, arguments and motives of the opponent. However, we are seldom out of humor, and se enothing in this instance to induce a cloud. We extract freely from "*Agricola*" where he is likely to be useful:

"While on the subject of cane culture, I should like to elicit the opinions of planters, why rattoons fail to send forth a sufficient number of sprouts, after the first year, generally, and diminishing in number and the size of the cane produced yearly; though the same land re-set with plants will produce as finely as ever—showing that it is not the exhaustion of the soil mainly, which occasions the phenomena, as assigned in the Review, but some other cause. This, we all know, occurs on new lands. If exhaustion of the soil occasioned it, and the theory is true that under the covering system 'the soil improves in fertility,' the measure of endurance of stubble or rattoon, would be the extreme at which it could be sufficiently earthed or hilled. But the growth of plant cane on the same land sufficiently refutes the supposition.

"I notice that the plant canes throw out fewer points, (or stool roots?) at or below the surface of the soil than the rattoon canes, and as the joint roots from the cane planted as seed, appear essential, not only in fixing it in the ground, but in sustaining the young shoot through its first stages of growth, I infer that the ratoons fail to germinate and grow vigorously in the second and third year's form, on account of their deficiency in this respect; the roots of the previous season not influencing the growth.

"From this reasoning I deduce the opinion, that bareing the stubble too closely of earth in the spring, is an injurious practice; as the bud or young sprout is mainly dependant on the moisture derived from the soil for its growth, until it puts forth roots of its own. It should be stirred, I think, to admit air and heat, but not moved from the stubble as is common, and as the modern farmer advises. For first year's rattoon, it does not make much difference, for the reason I have above suggested; and perhaps I may very well be answered, 'that no good planter depends beyond the first year on ratoons;' such too, I think, is the practice among the best farmers,

and such I have understood is the common practice on the coast. Many of our prairie planters place no dependence on rattoons, planting yearly their entire crop.*

"As to the best seed cane. Which is the best, that taken from the plant cane or that from the rattoons? The rattoon has the fullest and most hardy bed, and its shorter joints give more sprouts from a given length of cane. The plant canes are smaller budded, flatter, and have a larger proportion of buds that are immature. I have planted of each kind, and think the latter makes the most forward cane, but not the earliest ripe. Indeed, I at one time attributed to this cause having the most immature crop I ever rolled. I should prefer on old land the plants for seeding—on new land the rattoons. But the taking of seed from plant canes destroys nearly all prospect of rattoon from the same land, a sacrifice which to most woodland planters will be a consideration."

3.—Corn and the Corn Trade.

It appears from a late number of the St. Petersburg Gazette that the Russians have for export a surplus of the following grains: Rye Meal.—On the first of January, 1847, there were in private store-houses 468,000 sacks, and on the different water courses near St. Petersburg, 450,000 sacks more, on the way to market.—Awaiting the opening of navigation in the interior, 947,000 sacks were estimated. Stimulated by high prices, the Gazette counts on an additional receipt during the year, of 1,000,000, giving a total of 2,600,000, or 1,600,000 sacks over and above the wants of the city, and ready for exportation. The total of the surplus of Russia, at St. Petersburg and Odessa, is not far from 25,000,000 bushels wheat.

The following is from the Commercial List, Philadelphia:

Export of Breadstuffs since Sept. 1, 1846.

Places.	*Flour bbls.*	*Meal bbls.*	*Wheat bush.*	*Corn bush.*
New York,	1,075,885	280,906	1,430,041	4,727,623
New Orleans,	845,925	11,441	97,029	3,070,514
Philadelphia,	360,846	224,314	517,662	953,983
Baltimore,	535,415	61,060	105,988	1,400,682
Boston,	103,295	20,074	2,800	557,190
Norfolk,	22,289	8,716		912,372
Richmond and Petersburg,	49,160	8,105		27,164
Alexandria & Washington,	11,276	1,244		54,300
Charleston,	500		466	40,000
Savannah,	1,807	253		66,872
Mobile,	765			28,406
Apalachicola,				40,000
Wilmington, Del.,		5,103		
Newark, N. J.,	91	2,034		912
Gardiner, Me,	500			
Cleveland, Ohio,	8,862		76,169	
	3,016,616	619,247	2,230,155	11,880,018

By changing the flour and meal into bushels, allowing five bushels of wheat to a barrel of flour, and four bushels of corn to a barrel of meal, and adding the same to

* Col. Andrew O'Brien, of Bayou Bœuf, is stated to have followed this method of cane culture for twenty-five years:

"Land that has already borne cane should be ploughed deep, and thrown into high beds. With a deep narrow plough and two horses, run a furrow on the bed. If the land is new, put in a cane and a half six feet apart. If old, put in two canes—six feet apart. The furrow should be well cleaned out that the cane may lie evenly on the bottom. Cover deep or shallow, to suit the fancy. If deep, scrape early. In cultivating stubble, bar off as close as possible. If there is a prospect of dry weather, throw back without delay. The best way to save stubble is to draw trash well up on the rows as soon as possible after cutting, and not to burn off until first of March."

the wheat and corn, we have a total of 17,313,235 bushels of wheat, and 14,357,006 bushels of corn.

The exports from the United States for the fiscal year, ending June 30, 1846, were 2,289,476 bbls. flour; 298,700 bbls. corn meal; 38,530 bbls. rye flour; 1,613,795 bushels wheat; 1,826,068 bushels corn; 638,221 bushels of other grain; or, reduced to bushels at the rate of five bushels for each barrel of flour or meal, 18,211,614 bushels, being something more than one-half of what has been exported in eight months of the present year.

The New York Courier and Enquirer remarks further: Now, our total export of wheat and corn, the largest ever made, is estimated for this year at twenty-eight and one-fourth millions of bushels. To carry that quantity,—and this brings into view another element which enters largely into all considerate estimates of the exportation of grain, the amount of shipping needed for transporting the cargoes, let us now inquire what number of vessels would be requisite.

Estimating the bushels of wheat and corn at 56 lbs. each, 20,000 bushels will weigh exactly 560 tons, the full average of what merchant vessels will carry. Now, supposing each vessel to make three voyages, and to carry 20,000 bushels at each voyage, it would require about 470 vessels of 500 tons each, equal to 235,000 tons. The whole amount of tonnage employed in foreign trade for the year 1845, and it was the largest amount employed for any year theretofore, as given in the annual report of the Secretary of the Treasury to Congress, in December, 1845, was of American vessels cleared, 2,053,977; foreign vessels cleared, 930,275. Making a total amount of tonnage, 2,984,252.

Hence it will be seen that the exportation of the cereals for the present fiscal year would require, upon the basis above stated, about one-twelfth of the tonnage which sufficed for the whole foreign trade of the United States in 1845, and that after all that shall be exported, there will remain in the United States, if the estimates of the Patent Office, at Washington, which a practice of many years should now render somewhat accurate, are at all to be depended on, more than four hundred and ninety-six millions of bushels of wheat and corn; the whole quantity exported not amounting in fact, to six per cent. of the quantity raised.

It was in view of these results—accurate, if the public statistics at Washington, published under the sanction of Congress, are trustworthy, that we have heretofore expressed the opinion that the supply of grain from this country would only be limited by the difficulty of obtaining conveyance.

4.—Selection of Seed Corn.

The demands now made upon our Indian grain market by all the world, renders it a matter of first necessity that every known improvement in culture should be adopted. Our friend, the Hon. George Strawbridge, refers us to a letter from Mr. Cook, of Virginia, containing some valuable hints about "seed," and states that a certain quantity of it was received by him and distributed to a number of planters in our vicinity.

Mr. Cook recommends the fall season for selecting seed corn, and that all who have tried it at his suggestions, have been eminently successful. To use his own language, "in cutting off the tops of corn in the fall, I would advise the tops to be left on those stalks having two or three fine ears and which are very forward and the shuck or husk dry and white, thereby showing their forwardness. By the top they can easily distinguish, at gathering time, the seed corn, and gather and house it to itself and not take the shuck off till planting time in the spring, keeping it until then secure from rats and vermin. By continuing this process for a few years they will materially increase their corn crops, with so little trouble that no practical farmer should fail to try it."

The Editor of the South Carolinian remarks upon the cut-worm, so destructive to corn, that its ravages may be prevented in the following manner:

"As soon as the corn is covered with earth, let a hand follow and apply a dressing of ashes and ground plaster, at the rate of one-third of the latter to two-thirds of the former; or if plaster cannot be procured, ashes alone, bleached or unbleached—the latter would be preferable, of course. A handful to each hill would be sufficient. A slight dressing of lime would answer instead of ashes, but in order to preserve the hands, it should be dipped out with a proper dipper, which should be made of a size suitable to the quantity intended for each hill of corn."

5.—Resources of the Great West.

The following extraordinary statistics are from the Cincinnati Chronicle:

There is dependent upon Cincinnati a circuit of country including in the State of Ohio, twenty-nine counties—running from the Ohio North to Shelby; twenty-one counties of Indiana, on the Eastern side; twenty-six counties of Northeastern Kentucky, and eleven counties of Western Virginia. There is no other city or town, which can materially compete with Cincinnati, in that region. This comprises a space of just about 40,000 square miles.

By the agricultural statistics of the census of 1840, and reports since, it appears that the section of country thus described produced, in 1846, as follows: of Indian Corn 51,870,015; of Wheat 10,988,579; of Oats 13,229,526; of Barley 124,866 bushels. The following conclusions are deduced:

1. That the Corn and Wheat raised around Cincinnati, in 1840, was equal to *one-eighth* that of the *entire* United States. That, at the rate of European cultivation, it would be one-half of the whole raised in the United States!

2. That the quantity actually raised in 1846, within these limits, would feed six millions of people, and their cattle and horses.

3. That New York and Boston, cities with half a million of inhabitants, are the marts of a country with but five millions of inhabitants, and whose people do not raise wheat and corn enough to feed themselves!

4. That if Cincinnati was now as populous as the city of New York, it would not have attained the size of a city proportioned to the *feeding capacity* of the country, immediately adjacent to it, in the year 1846!

5. That of the eighty-seven counties thus estimated, *two of them* (Butler and Clermont) raise more Indian Corn than the United States *ever exported in any one year prior to* 1846.

6. That *fifteen* only of these eighty-seven, (viz: Hamilton, Butler, Warren, Preble, Montgomery, Clermont, Brown, Clinton, Green, Fayette, Madison, Clark, Champaign, Miami and Logan,) raised more corn in 1846 than the entire amount exported to Europe in 1846–7, with the famine of Ireland and half of Europe to make the demand!!

7. That the amount raised in these eighty-seven counties, was four-fold the boasted export of the United States in 1846–7.

6.—Northwest Regions of the United States.—New Territory of Minesota.

The Toledo Blade is authority for the following:

"It is bounded on the north by Canada West; on the east by Michigan and Wisconsin; on the south by the parallel of 43 degrees 30 minutes, which is the most northern line of Iowa; and on the west by the river Sioux and Red River of the North. The line separating Minesota from Michigan is in Lake Superior, and that separating it from Wisconsin passes along Lake Superior to the Falls of the St. Louis river, and thence south till it strikes the river St. Croix, which it follows to the Mississippi, thence down the Mississippi to latitude 43½, the place of beginning.

"Embraced wtthin these boundaries there are about 90,000 square miles—equal to 58,000,000 of acres. It is nearly the same latitude as the State of Maine. In area it exceeds the Island of Great Britain, and it is nearly equal to France. Comparing it with older States, it is as large as New York and Pennsylvania. For the production of wheat and the grasses the soil and climate are favorable."

7.—The Cotton Worm.

The scientific contribution of Dr. D. B. Gorham in our present number, will be read everywhere with interest. We should be pleased always to have his pen in our service.

As we note everything that it said pro and con about this extraordinary scourge of the cotton field, we set aside some observations for the purpose lately made in the Baton Rouge Conservator, by its editor.

The writer enunciates his proposition thus:—

"*Our argument is that the army worm is a form of life produced by poisonous fluids, generated by the continued cultivation of the same plant in the same soil for a series of years.*"

He maintains that the remarkable destroyers of vegetable products are confined to staples entirely, and adduces as examples the "fly carrier" of the indigo, the "insect"

of the orange tree, the "rot" of the potato, the "fly" of the wheat. In one county in New York, a resort to high manuring put an end to the devastations of the wheat fields by this insect. As further examples are given the "curculio" of the plum tree, the "insect" of the turnip fields of England, "mildew" of the vineyards of France, Spain, and Italy, the "yellow" of the peach tree, &c.

The final conclusion drawn is—

"The army worm is the same in kind as the fly of the wheat, the capada insect of the indigo plant, the disease of the potato called the "rot," and never can be exterminated except by rotation of crops, wearing itself out, or the artificial addition to the soil of the principal that having been previously exhausted, now displays the fact by the production of the army worm."

8.—The Town of Shreveport, Louisiana.

Far away in the northwest of our State, and in the immediate vicinities of Texas and Arkansas, the town of Shreveport presents much to interest. According to the Gazette, it is steadily advancing in population and general improvement.

"The tone of morality has become vastly elevated; piety is respected; a desire for the advancement of religion and science plainly manifested. Men now, which was not the case in days of yore, suspend on the Sabbath the pursuit of their wonted avocations. We hear not now "the song of revelry by night," nor is the ear pained by the shrill crack of the pistol. The echoes have died away. Wrangling and party violence have been consigned to the tomb of the Capulets, and all is peace, plenty, and happiness."

9.—Progress of Charleston.

We are not a little delighted to contemplate the improvement which is taking place in the commercial character and reputation of our neighbor city. She has occupied a high and proud position ,and will occupy it again.

The Evening News, a sheet remarkable for its statistical accuracy, congratulates the citizens on the advent of a better day. For twenty years they have suffered reverses, prodigious losses by fires, from injudicious investments, and from heavy taxes. The cloud is passing over. The following are gratifying statistics. God bless the old city, let her march onward, onward, onward, in her career!

Receipts at Charleston.

	1846–7.		1845–6.
Cotton,	338,009	Against	213,449 bales
Rice,	130,213	"	91,168 bbls.
Increase Cotton,		124,850 bales.	
" Rice,		39,045 bbls.	

The value of each bale cotton being valued at $26 in 1845–6, and $40 in 1846–7, we have total value cotton in these years—

338,009 bales at $40,		$13,520,360
213,449 " $26,		5,549,674
Excess value cotton,		7,970,668

Valuing Rice at $25 per barrel each year—

130,213 at $25,	$3,255,325	
91,168 at $25	2,279,200	
Over 1846,		976,125
Total excess in value 1847.		$8,946,811
Flour received by railroad from interior of the State etc.,	6,000 bbls.	
" " boat " "	1,500 "	
	7,500	
Grain, corn, wheat, and peas received from interior,		177,797 bush.

"If we take the receipts of produce in 1846–7 as a criterion for the future, we would not assume too high an average, supposing that those receipts remain stationary; but when a moderate computation is made of the addition which the railroad

communications with the Southwest and the interior of our State, in prospect or in course of rapid completion, will make to those receipts, the increase revenue in the various departments of business must be progressively in a higher ratio than the increase of the present over the past year. It is estimated that the receipts of cotton at this port will be augmented at the rate annually of 50,000 bales for the next five years. This would nearly double our present annual receipts at the end of that period, and increase the revenue of all parties connected with the purchase and shipment of this staple at least $1,000,000 per annum.

10.—Manufactures in Alabama.

A correspondent in the Alabama Planter adverts to the fact that the manufacture of iron was commenced in Bibb and the surrounding counties in that State, as early as 1830 or 1831. There are several establishments now in successful operation, and the writer observes:—

"Indeed I know of no cause why they should not vie with any others of the kind in the United States. The ore is pronounced by competent judges to be very rich. It lies in many places almost or quite at the water's edge. Timber for fuel is inexhaustible and of the best quality, and for those who desire to use it, bituminous coal is almost at the door, while the water power is almost, as before said, unlimited—the whole distance from the junction of Shoal and Mahon's creeks (forming what is often called Little Cahawba) to the Big Cahawba, being a succession of falls, presenting in its whole course of fifteen or sixteen miles, scarcely a mile without both fall and power necessary to drive the largest kind of forge and furnace together, and having at all places the best rock foundations upon which to erect dams and all other necessary superstructures, with limestone in abundance to construct them with, if preferred to timber, which is almost without limit as to the quantity, and of superior quality.

"Talapoosa, Coosa, Benton, St. Clair, Blount, Jefferson, Tuscaloosa, and perhaps Pickens, Perry, and Autauga have each advantages corresponding with those in Bibb and Shelby, and need only the hand of industry and enterprize to develope them. It might be further remarked that these resources are not in barren hills or mountains where roads would have to be constructed to reach them, and provisions transported a distance to them, but are mostly in fertile vallies in comparatively dense settlements of industrious and frugal farmers, who could furnish in great plenty all the provisions needed for the manufacturing establishments built up among them, while the water privileges are so abundant that prices are almost nominal, offering to capitalists additional inducements in this respect to enter into business here, while the many other resources of this country for manufacturing purposes must at no distant day create a large demand for iron in its various forms of machinery, implements, etc."

The State appears to be in earnest also about the manufacture of cotton. The "Planter" informs us that there are establishments in Bibb and Perry counties, and that Tuscaloosa is preparing to enter largely into manufacturing. There have been established factories at Florence and Tuskegee.

"Mr. Daniel Pratt, of Autauga county, has also a mill in operation. This gentleman, some fifteen years ago, commenced the manufacture of cotton gins. The place selected was then a wild and secluded spot, but its aspect has since been changed as if by magic. As the demand for his work increased, additional machinery and artisans were employed, until in time the workshops and dwellings swelled into a beautiful and thriving village. It has, very appropriately, received the name of its founder, thus perpetuating, if he had no higher claim to be remembered, his name and enterprize. In the mean time, other branches of industry followed, and finally a cotton factory was established.

"It is a matter of regret that we are not possessed of sufficient data to describe minutely its extent and operations. A friend who visited Prattville some months ago, and enjoyed for several days the hospitality of its intelligent and amiable proprietor, promised to furnish us with a detailed account of the cotton mill as well as of the village, but we fear he has forgotten both his promise and the glowing description he gave us of the beautiful and picturesque appearance of this embryo Lowell.

"Mr. Pratt himself, we are glad to see, is engaged in informing the people, not of his own efforts in pushing forward manufacturing enterprise, but of the obvious policy which Alabama should pursue for enriching and developing her resources."

THE PUBLISHING BUSINESS.

1.—*Overland Journey Around the World*, during the years 1831 and 1842, by Sir George Simpson, Governor in chief of the Hudson Bay Company's Territories, complete in two parts. Philadelphia, Lea & Blanchard. New Orleans, J. C. Morgan.

This is one of the most valuable and interesting works recently issued from the press and brings to our intimate acquaintance portions of the globe the most remote and the least explored. Simpson, after Ledyard & Cochrane, was the first individual who ever attempted a journey like the one illustrated in the volumes before us, and he went even further than his pioneers, by visiting Kamschatka, British America, California and the Sandwich Islands, and graphically describing their peculiar characteristics.

2.—*Omoo: A Narrative of Adventures in the South Seas*, by Herman Mellville, author of Typee, in two parts. New York, Harper & Brothers, 1847. New Orleans, J. B. Steel.

Mr. Melville has been favorably known to the world by his brilliant and spirited "Typee, or Peep at Polynesian Life," and he has now continued in a similar vein these sketches, which the world received so favorably. The word Omoo is of the Marquesas Islands, and signifies a rover or wanderer.

3.—*Dictionary of Poetical Quotations*, by John T. Watson, M. D. Philadelphia, Lindsay & Blakiston. New Orleans, J. C. Morgan, 1847.

> "The world is full of poetry—the air
> Is living with its spirit; and the waves
> Dance to the music of its melodies
> And sparkle in its brightness."

The work is dedicated to Mrs. Welby, the sweet "Amelia" of American song. It bears the evidences of much pains and labor in compilation, and for those who think of poetry as Byron did of *Latin*, "that it comes so *pat in*," the work will come highly recommended.

4.—*Scripture Illustrated*, by Rev. Charles Field. Harper & Brothers, New York. J. B. Steel, New Orleans, 1847.

A beautiful little volume for the young, imparting instruction wrought with pleasure. The introduction is written by the Rev. John Todd.

5.—*Washington and his Generals*, by J. J. Headley, author of Napoleon and his Marshalls, &c., 2 vols. New York, Baker & Scribbner, 1847.

We received the first volume from Messrs. D. Baker & Co., Camp street, New Orleans. It contains biographical sketches of Washington, Putnam, Montgomery, Arnold, Stark, Schuyler, Gates, Steuben, Wayne, Conway, Mifflin, Ward and Heath, with engraved portraits of most of these distinguished generals. The production is highly creditable to the author, and will, without doubt, obtain considerable circulation. For, somehow or other, it comes to pass that let things go as they may, the times that tried men's souls and the actors in them, still kindle enthusiasm and interest.

6.—*Hackley's School Algebra*. Harper & Brothers, 1847. A Treatise, in boards but of handsome appearance and beautiful print, upon an interesting branch of education. The system, arrangement and simplification aimed at here, give the work a relative merit. Every one should study this simple method of using numbers, which independently of its mental training, presents the advantages of facility, economy of time and accuracy. Our professor used to term Algebra the language of mathematics.

7.—*The Tourist's Guide, or Pencillings in England and on the Continent*, by John H. Sherburne. Philadelphia, Zieber & Co. These are a series of notes taken *con amore*, by the accomplished author, whose faci-

lities, by reason of his intimacy with the fashionable society of Great Britain and Europe, afforded him ample opportunities of exercising that keen observation of men and things which is displayed in this work. Nor does his book aim at gossip, *a la* Willis alone; but it has a higher ambition, a nobler aim; and while it affords the casual reader of elegant literature a fine repast, it gives to the knowledge seeker substantial facts. In truth, we have never seen the *utile cum dulce* combined more successfully.

8.—*History of United States for use of Schools*, by Marcius Wilson. New York, Mark H. Newman, 1847. New Orleans, D. Baker & Co.

The author of this useful and accurate work, submitted a Report, in 1845, to the New Jersey Society of Teachers and Friends of Education, in which he points out errors in most of the school histories now in use, viz. those of Frost, Goodrich, Hall, Willard, &c. &c., and he proposes in the present volume to put in the hands of youth, a volume in every respect reliable. We have not been able to examine the work sufficiently to determine how far he has achieved this.

9.—*Pictorial History of France.—Pictorial History of Greece.—Pictorial History of England.—Pictorial History of United States.* By S. G. Goodrich, Peter Parley.

The great reputation of this writer as an instructor of the young both in England and in this country, renders it superfluous in us to say any thing in commendation of his labors.

The present volumes form but a portion of a series of some twenty, well and uniformly bound, and calculated from cheapness of cost to enter into the largest circulation.

They may be had at D. Baker & Co's., Camp street.

10.—*Caldwell's Manual of Elocution*, 1847. We are favored with this volume by D. Baker & Co. The author makes great use of Rush's Treatise on the Voice, and gives practical rules for carrying out the principles of the great physician.

11. *Orrin Lindsay's Plan of Aërial Navigation*, edited by J. L. Riddell. This was a lecture delivered before the People's Lyceum, and now published at the request of several gentlemen. It is an admirable production, and without question the most capital "moon story" we ever heard of. Professor Riddell in a sportive whim has in this instance made strict science tributary to his fancy, and the basis being assumed, his narrative pursues a smooth course with demonstration at every step in the progress.

Mr. Lindsay, an eccentric genius, conceiving with Newton that gravity is the result of a direct influence of matter upon matter, sets himself to discover some substance "impervious to this gravity," capable of shutting off, as it were, its influences. This interposed between man and the earth would of course destroy its attraction and leave him to move at his will through space.

The "impervious" substance is discovered to be "prepared steel, superficially amalgamated with quicksilver, and then strongly magnetized"—but the process of preparing this steel, "aye, there's the rub." Mr. Lindsay is too keen a hand to reveal the secret just now.

Well, this balloon is constructed, the plates interposed, and the aëronaut leaves the vicinities of Natchez, Miss., and shoots away 26,400 feet, 3300 feet higher than the ascent of Gay Lussac.

But this is nothing, mere *moon-shine* to what is in reserve. The indefatigable Lindsay makes a few corrections, enlarges his plans, and with one Josslin, a kind of "Man Friday," to Robinson Crusoe, cuts loose from gravitation again and floats out into thin air. In ninety hours he comes within 100 miles of the moon, and letting in gravitation, away they go, he and Josslin, like all the world, (a very small world, to be sure) around and around and around this orb, a miniature satellite, whose period of revolution is "54 minutes 17 seconds" precisely. Did space admit we should

be happy to extract the passages of *luna*-grophy which follow; but as Mr. Lindsay still lives, and is preparing to visit "Mars," we will await the further result of his explorations. To Professor Riddell we present our thanks for the pamphlet.

12.—*American History*, comprising Historical Sketches of the Indian Tribes; a description of American Antiquities, with an inquiry into their origin and the origin of the Indian Tribes: History of the United States, with Appendices, showing its connection with European History: History of the Present British Provinces: History of Mexico; and History of Texas, brought down to the time of its admission into the Union, by Marcius Wilson, 1 vol. New York; Mark H. Newman. New Orleans: D. Baker & Co.

This is an interesting volume upon a new method of arrangement, embracing in a short compass almost every thing that could be desired by the general reader in relation to North America. It is illustrated by numerous wood cuts and maps and marginal notes. The writer has strongly developed the capacity of collecting and imparting information, and we doubt not his work will meet with a large proportion of popular favor. In his tone he is temperate, even when treating of contemporaneous events, a thing most difficult to achieve, and his principal aim throughout appears to subserve the cause of education and historic truth.

Our Exchanges.

Upon our table appears *Hunt's Merchants' Magazine* for June, with more than its usual quantum of valuable matter. The article by Colonel Childs, of Philadelphia, is worth the volume, as also is the one on Breadstuffs. We see that Mr. Hunt has been made a member of the Statistical Society of England, an honor richly deserved. Mr. Hunt publishes in his present number some twenty pages of commendations his work has received from the most distinguished sources.

We once found fault with our neighbor for the continued receipt of our Review without acknowledgment. In the following notice he has given, our misapprehension is corrected:

"De Bow's Commercial Review for May, contains much valuable information of a commercial and miscellaneous character. It has reached its *seventeenth* number, which is, in our opinion, the best of the series. Success to our name-sake."

We have next the *Southern Literary Messenger*, edited by our friend Minor, of Richmond, Va., June number. Almost monthly a marked improvement is recognized in this excellent periodical, whose circulation deserves to be largely extended.

Bankers Magazine. Baltimore: J. Smith Homans, monthly, June, 1847. We have frequently called attention to this work. The present number contains the following articles: Money Market in U. S.; English Money Market; Stock Investment; Bank Statistics; Pursuit of Knowlecge by Merchants: Bank of England; Life Assurance; Legal Miscellany; State Finances, etc.

Law Reporter, for June—Boston. Monthly, with Recent American Decisions, Original Papers, etc.

Law Journal, Philadelphia, for June. Monthly. Usually interesting and valuable to the profession.

Silliman's Journal for May. Bi-monthly. Contents, among other items, Scandinavia, Free Electricity, Zoophytes, Caricography, Glycocoll, Outline Features of Earth, Algae of United States.

Farmers' Library for May, J. S. Skinner, New York. Every agriculturist should have it. It contains a continuation of Stephens' Book of the Farms, and a great variety of information upon the different crops of the Union.

ARCTIC OCEAN

This M
Europe and
in the centr
250.000.000.
with a popu
our Conti
both.

S I B E R I A

Riv Obe

Gulf of Obe

Riv Yenesei

R. Lena

Lena

Obe

A S I A

Irtish

Sea of Okotsk

Aral Sea

R. Songari

R. Saghalien

Gulf of Tartary

TARTARY

CHINESE EMPIRE

The population of Japan is estimated at
below 50.000.000 and as high as 250.000.00
its annual commerce estimated at $200.000

Pekin

Sea of Japan

Hong Ho

TIBET

Nankin

Chang Hae

NIPON

Islands of Japan

5400

6200

Burampooter

Indus

Tchusen

Ning-tchen

Sailing distance around the cape to New York or London estimated at more than 18000

Ganges

Kiang

Ame

Canton

Formosa

6340

HINDOOSTAN

Calcutta

Macao

Hainan

Arabian Sea

Bay of Bengal

Ladrone Is.

Philippine Islands

Ceylon

China

1320

6920

Straits of Malacca

Sumatra

Singapore

Bernee

New Guinea

INDIAN OCEAN

Friendl

Route to China

AUSTRALIA

NEW ZEAL

Nº2

Map shews the position of our Continent as compared with
nd Afrira on one side and Asia on the other, placing us
tre. Europe 3000 miles from us with a population of
00. and Asia on the other side about 5000 miles from us
pulation of more than 700.000.000 The Rail Road across
tinent will make us the centre and thoroughfare for

Baffins Bay

Bhering's Strait

Russian America

Mc Kenzie's R.

Hudsen's Bay

Aleutian Islands

NORTH AMERICA

Vancouver I.

Columbia Riv.

4200

4000

4000

PACIFIC

3240

5340

2160

San Francisco

Boston

New York

Philadelphia

UNITED STATES

Charleston

Savannah

MEXICO

Gulf of Mexico

Sandwich Islands

Jamaica

3840

The population of China, from all authentic accounts, cannot be less than 500.000.000, all above the parallel of 22; so that China and Japan together contain more than half the population of all the world all between the parallels of 22 and 50, while the population of Europe, is we may say all above the parallel of 40, placing the population of all the world on nearly the same belt.

Bay of Panama

Friendly Islands

Low Islands

Society Islands

SOUTH PACIFIC

SOUTH AMERICA

Valparaiso

Buenos Ayres

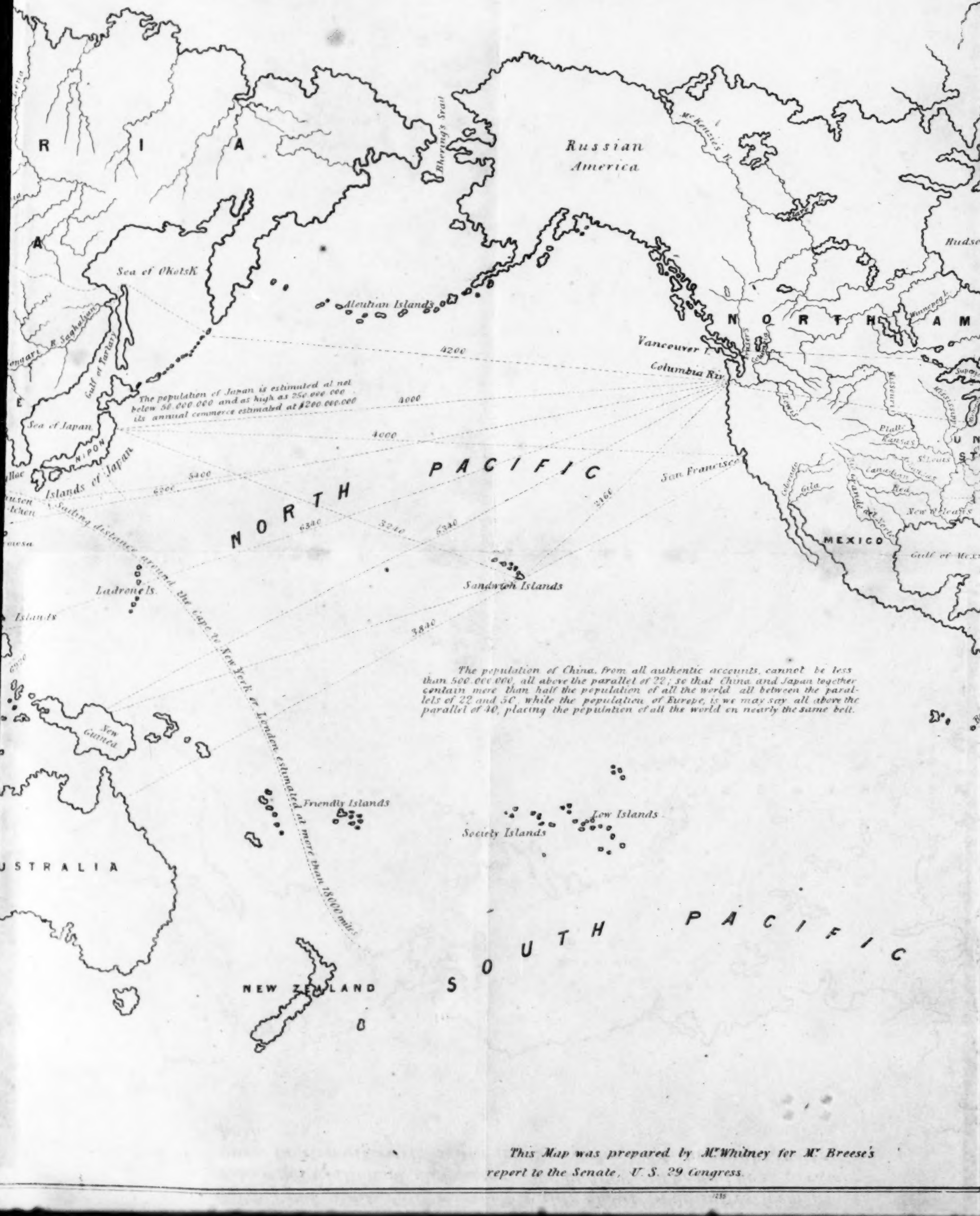
Falkland

Cape Horn

This Map was prepared by Mr Whitney for Mr Breese's report to the Senate, U. S. 29 Congress.

Nº2

This Map shews the position of our Continent as compared with Europe and Afrira on one side and Asia on the other, placing us in the centre. Europe 3000 miles from us with a population of 250.000.000. and Asia on the other side about 5000 miles from us with a population of more than 700.000.000 The Rail Road across our Continent will make us the centre and thoroughfare for both.



The population of China, from all authentic accounts, cannot be less than 500.000.000, all above the parallel of 22; so that China and Japan together contain more than half the population of all the world all between the parallels of 22 and 50, while the population of Europe, is we may say, all above the parallel of 40, placing the population of all the world on nearly the same belt.

This Map was prepared by Mr Whitney for Mr Breese's report to the Senate, U. S. 29 Congress.

Spitzbergen
Baffins Bay
Davis Strait
Iceland
NORTH ATLANTIC
Hudsons Bay
M E R I C A
St John
Halifax
Boston
New York
Philadelphia
U N I T E D
S T A T E S
Charleston
Savannah
Bermudas
Azores
Strait of Gibralta
Madeira
Canary Is
Algiers
Mediterranean Sea
Tagus
Paris
London
Vienna
Odessa
Constantinople
Black Sea
Caspian Sea
PERSIA
Moscow
St Petersburgh
Archangel
White Sea
Baltic Sea
Berlin
Mexico
Jamaica
St Domingo
Cape Verd Is
Bay of Panama
S O U T H A M E R I C A
Pernambuco
Ascension
St Helena
Rio Janeiro
Valparaise
Buenos Ayres
S O U T H A T L A N T I C
A F R I C A
Red Sea
ARABIA
MADAGASCAR
Cape of Good Hope
Falkland Is
I Georgia
Cape Horn

Miller's Lith 162 Broadway N Y